



**THE
NINETEENTH
LACUS
FORUM
1992**



THE NINETEENTH

LACUS FORUM

1992

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I

SPECIAL LECTURES

1992 PRESIDENTIAL ADDRESS

THE STRATIFICATION OF LANGUAGE

Presidential Address

Sebastian Shaumyan
(Yale University)

Four Strata of Language

In 1954 Hjelmslev published a paper called *The Stratification of Language*.¹ Following Saussure's semiotic theory of language, Hjelmslev proposed the concepts of the *strata* and of the *stratification of semiotic systems*. He distinguished four strata in language, or, generally, in any semiotic system: the *expression*, the *content*, the *form*, and the *substance*. The *expression* and the *content* correspond to Saussure's *signifiant* and *signifié*. The expression is an acoustic, graphic, or another means of representing thought; the content is thought as expressed by language.

But not everything in the expression and the content is part of language.

Take the content. The *substance*, that is, a conceptual zone used for building the content, may be the same for all languages; but the *form* of the content, that is, the way it is analyzed, is unique for every language. For example, the tense zone is analyzed differently in languages that have (apart from periphrastic formations) have only a preterite and a present (as, for instance, in English), and where therefore the present also covers the area that is covered in other languages by the future, and in languages that set limit between present and future; and the boundaries are different in languages like Latin, Ancient Greek, and French, that distinguish several

1. L. Hjelmslev. 1954. "La stratification du langage", *Word*, 10, p. 163-188.

kinds of preterite.

The same thing can be observed in the expression. The substance of the expression, that is, acoustic and physiological sphere of movement of the organs of speech, is a continuum that is analyzed differently in different languages. An example is the continuum shaped by the median profile of the roof of the mouth, from the pharynx to the lips. This zone is usually divided into three areas: a back *k*-area, a middle *t*-area, and a front *p*-area. But if we take stops, Eskimo and Lettish, as some others, distinguish two *k*-areas. Eskimo places the boundary between a uvular and a velar area, Lettish, between a uvular and a velar area. There are languages, like many Indian, that distinguish two *t*-areas: a dental and a retroflex.

Therefore the semiotic theory of language introduces a new pair of concepts: form and substance. It distinguishes the form and substance of the expression and the form and substance of the content.

There is a certain relation between the form of the expression and the form of the content. It is determined by the principle of *commutation*, which can be defined as follows: if a difference in the content corresponds to a difference in the expression, then the difference in the content is relevant, and, conversely, if the difference in the expression corresponds to a difference in the content, then the difference in the expression is also relevant.

In the expression differences may occur that do not commute with differences in the content. For example, English *p*, *t*, *k* before vowels are aspirated but *p*, *t*, *k* before other consonants or at the end of a word are not aspirated. But since these differences do not commute with any differences in the content, they are irrelevant. Similarly, the differences in the content may not commute with differences in the expression. For example, in Georgian, Finnish, and Hungarian the same word may mean "he" and "she" (Georgian *is*, Finnish *hän*, Hungarian *ő*): this difference does not commute with any difference in the expression, and therefore is not relevant. as opposed to languages such as English, French, German, or Russian, where it commutes with differences in the expression.

Differences in one plane that do not commute with differences in another plane constitute *variants* of a unit. Variants are in a relation of *substitution* to one another and represent an *invariant* under all possible changes. There are variants of expression units and variants of content units.

A language proper is a system of invariants. Therefore, a language proper contains only the form of the expression and the form of the content. The substance of the expression and the substance of the content are not part of

a language. The variants of a unit are not considered to be formal objects, and there is no hierarchy among them: they constitute a class of functionally equivalent objects.

Such is Hjelmslev's concept of the stratification of language and of any semiotic system. This concept was successfully developed by Lamb, who in the 60's advanced a linguistic theory called *Stratificational Grammar*.² We find an interesting counterpart of the form and substance in Pike's *Tagmemics*, which distinguishes the *emic* and *etic* levels of language.³

The System and Context Strata

I accept the distinction of four strata proposed by Hjelmslev as a backbone of any semiotic theory of language. And I develop the concept of the stratification of language by formalizing the concept "the variants of a linguistic unit". I define the variants of a linguistic unit as a hierarchical class of formal objects. The hierarchy means that any class of variants of a linguistic unit is generated by a process called *superposition* and comprises a *chief variant* and *subsidiary variants*.

The variants of a linguistic unit are its various modifications in various syntactic contexts—the variants of a linguistic unit are context-dependent. The linguistic unit in itself does not depend on the syntactic context. It depends on its place in the system of language; it is system-dependent.

In view of this, I add two new strata to the strata defined by Hjelmslev—the *system* and the *syntactic context*. As will be shown below, the syntactic context is a strictly formal concept defined by formal processes.

This approach redefines the concept "form of language". Hjelmslev relegates variants to the substance of language. But if variants are formally defined, they are part of the form of language.

Parts of Speech and their Variants. Superposition

It is commonly agreed that there are four autonomous classes, or types, of words called *parts of speech*: verbs, nouns, adjectives, and adverbs. Conjunctions, prepositions, articles, and particles are non-autonomous words, and therefore are not considered parts of speech in the sense of

2. Lamb, Sydney M. 1966. *Outline of Stratificational Grammar*. Rev. ed. Washington, D.C.: Georgetown University Press.

3. Pike, Kenneth L 1982: *Linguistic Concepts: An Introduction to Tagmemics*. The Hague: Mouton.

autonomous words.

Now parts of speech occur in various contexts, and depending on its place in the context every part of speech is represented by its chief or subsidiary variants. Let me state in a dogmatic way that the chief variant of a verb is a *predicate*; the chief variant of a noun is a *primary term*⁴; the chief variant of an adjective is a *term modifier*, or *adjunct*; the chief variant of an adverb is a *predicate modifier*, or *adverbial*. This dogmatic statement will be motivated below.

The chief variants of the parts of speech may be illustrated by the sentence *Poor boy ran away*. In this sentence *ran* is one of the chief variants of the verb *run*; *boy* is one of the chief variants of the noun *boy*; *poor* is one of the chief variants of the adjective *poor*; *away* is one of the chief variants of the adverb *away*. The representation of a part of speech by its chief variant I call its *inherent syntactic use*.

The subsidiary variants of a part of speech are generated when the inherent uses of other parts of speech are superposed on its inherent use. For example, the noun *rainfall* may function as a primary term in a sentence, and that is its inherent use; by applying the preposition *of* to it we superpose the use of the noun modifier on it, which is its *acquired use*.

An inherent use of a part of speech A superposed on the inherent use of a part of speech B I call the *acquired use* of B. To illustrate, let us take the phrase *the area of rainfall*. Here *of rainfall* functions as a term modifier and in this respect it is similar to an adjective, but simultaneously it retains its noun properties, which makes it possible to modify it by an adjective as in *the area of heavy rainfall*. By applying the copula *is* to *a teacher* we superpose the predicate use on *a teacher* as in *He is a teacher*. Here *is a teacher* functions as a predicate and in this respect it is similar to a verb. But simultaneously it retains noun properties, which makes it possible to modify it by an adjective as in *He is a good teacher*.

The preposition *of*, the copula *is*, and similar devices for superposing syntactic uses I call *superposers*. The superposers are *syntactic-context markers* because they are used to denote specific syntactic contexts in which

4. The term *primary term* corresponds to Tesnière's *prime actante*. Rather than use the trite overloaded terms *subject*, *direct object*, *indirect object*, I prefer the neutral terms *primary term*, *secondary term*, *tertiary term*, which correspond to Tesnière's *prime actant*, *second actant*, *tiers actant* (cp. Tesnière, Lucien. 1965. *Éléments de syntaxe structurale*. Paris: Librairie C. Klincksieck, p. 105-114).

a part of speech acquires secondary syntactic uses.

The subsidiary variants of a word are bistratal objects: by retaining the basic properties of the word they are defined by the system, but by acquiring the properties of words of other types they are defined by the syntactic context.

Superposition is a strictly formal concept reflecting observable formal processes of language. There are observable strictly formal criteria for defining superposition. A syntactic unit derived by superposition is always more complex than the initial one; it consists of two parts: initial syntactic unit + superposer. So *read-ing*, where *-ing* is the superposer, which overlays the term use on the verb *read* is more complex than *read*. Superposers as all other language items are signs, and a sign is not necessarily a sequence of sounds. It may be a change of stress, an alternation, a change of word order, a change of syntactic context. Superposers may be denoted by syntactic contexts, which have the form of specific configurations. The concept of syntactic context as a sign of superposition or of other grammatical processes is not vague—it has the form of specific syntactic configurations, which is an observable phenomenon. For example, in *stone wall* the use of the term modifier is superposed on the noun *stone*, but here the sign of superposition—the superposer—is the position of the noun *stone* before the noun *wall*.

A superposition may be followed by one or more superpositions. So we get many layers of superposition. For example, in Russian the instrumental is usually used as a modifier of a predicate (which is an acquired use), but in some cases a use of a secondary term may be superposed on the instrumental, so the instrumental functions as if it were the accusative. For example, in *Ivan upravljaet zavodom* "John manages a factory" the instrumental *zavodom* denotes a secondary term (direct object) as if it were the accusative.

The Meaning of Superposition

Superposition is a tool for establishing syntactic connections between words that cannot be directly connected with one another because they belong to syntactically unconnectible types. For example, two nouns, say, *leg* and *table* cannot be connected with each other, but using the superposer *of*, we connect them and get *the leg of the table*. The nouns *silk* and *dress* cannot be connected with each other, but using a syntactic position as a sign of superposition we connect them and get *silk dress*.

Superposition enriches language with wider possibilities of expressing

thought and emotions. For example, using inherent properties of nouns, verbs, and adjectives, we get a predicative expression like *the candle burns*, and a nominal expression like *the blue sky*. Without superposition, adjectives can be used only in nominal phrases, and verbs can be used only in predicative phrases. But superposition extends our possibilities; it allows us to use adjectives in predicative phrases and verbs, in nominal phrases. Using the superposer *is*, we change *the blue sky* into *the sky is blue*, and, using the superposer *-ing*, we change *the candle burns* into *the burning candle*.

Superposition is a universal process. There are no languages without superposition because without superposition any language would be unwieldy. Superposition imparts an indispensable flexibility, a tremendous intellectual and emotional power to language. No language can dispense with superposition.

Although every language has superposition, languages differ in using different systems of superposers. Some languages like Russian and Latin, having rich inflection, in particular a case system, use inflectional suffixes as superposers. Other languages like French or English which do not have rich inflection use mostly syntactic positions or prepositions.

An important task of universal syntax is to answer the question how languages differ in their use of different systems of superposers.

Using the Theory of Superposition to solve Linguistic Problems

A. Passive Constructions

One of most knotty problems of universal syntax arise with respect to passive constructions. Jean-Pierre Desclés, Zlatka Guentchéva, and I have tackled this problem in the framework of Applicative Universal Grammar (AUG).⁵ Using the concept of superposition, I will summarize some results

5. Desclés, Jean-Pierre; Guentchéva, Zlatka; Shaumyan, Sebastian. 1985. *Theoretical Aspects of Passivization in the Framework of Applicative Grammar*. Amsterdam/Philadelphia: John Benjamins Publishing Company.

of our research in an informal way.⁶

What is the status of the agent in the long passive?

The usual answer is that the agent in the long passive is a modifier of the passive intransitive verb. This modifier is represented by an oblique case, such as the instrumental in Russian or the ablative in Latin, or by a prepositional phrase, such as *by* + *noun* in English.

This view is inadequate because although the agent in the long passive has the form of an oblique term it has also properties of a syntactic subject. This can be illustrated by the facts of the Russian syntax.

In Russian, as Perlmutter has observed, a syntactic law can be formulated under which reflexive pronouns can refer only to terms that are either subjects or are counterparts of subjects in active sentences.

Compare the following sentences:

- 1) *Boris mne rasskazal anekdot o sebe*
 NOM me/DAT told joke about REFL
 "Boris told me a joke about himself"
- 2) *Èta kniga byla kuplena Borisom dlja sebja*
 this book/NOM was bought INSTR for REFL

In 1) the reflexive *sebe* refers the real subject *Boris*. But in 2), which is a long passive, the reflexive *sebja* refers to the agentive term in the instrumental *Borisom*, which modifies the passive intransitive verb *byla kuplena*, but simultaneously retains the properties of the subject, from which it was derived.⁷

In view of similar observations, Perlmutter and Postal have come up with the conclusion that the agentive term in the long passive is not an intransitive predicate modifier, or an oblique term, as is commonly believed in contemporary linguistics, but a distinct entity. And since the

6. A formal presentation of the theory of superposition and of its application to an analysis of passive constructions is given in Shaumyan. 1987. *A Semiotic Theory of Language*. Bloomington and Indianapolis: Indiana University Press.

7. Perlmutter, David M. (Ed.). 1984. *Studies in Relational Grammar 2*. Chicago and London: The University of Chicago Press, p.10-12.

agentive term in the long passive is neither a superficial subject nor direct object, they need a new concept to refer to it, They call the agentive term in the long passive a *chômeur*.⁸ As I argue elsewhere, the claim that the agentive term is distinct from a modifier of an intransitive predicate is correct. But is only half of the story. The other half is that the agentive term in the long passive also has something in common with an intransitive predicate. The Relational Grammar of Perlmutter and Postal fails to recognize the importance of the form of the agentive term in the long passive with the form of the predicate modifier. The crucial fact is that the agentive term in the long passive is really a predicate modifier. But simultaneously it is a counterpart of a syntactic subject. Although the concept of the *chômeur* is a step forward compared with the traditional view of the agent in the long passive, it is inadequate.

The agent in the long passive has a dual structure: it is a predicate modifier on which there was superposed the use of a primary term (subject). This superposition is a result of a symmetrical configuration of active and passive constructions. Primary term in the passive construction is a counterpart of secondary term in active construction; and the predicate modifier in the passive construction is a counterpart of primary term in active construction.

The symmetrical configuration of active and passive constructions also entails the superposition of the two-place predicate property on the passive one-place predicate.

As a result of superposition, the agent of the long passive functions as its secondary term and the passive one-place predicate functions as two-place predicate. And the long passive construction functions as the converse of the active construction.

Superficially, one might conclude that we have come up with a traditional view of the long passive construction as the converse of the active construction. This view, favored in the past, has been mostly rejected by contemporary linguists. But this conclusion would be false. What is advocated here is that the long passive construction is bistratal, it has a syncretic structure; it is a unity of the two contradictory but simultaneously complementary structures—an intransitive and a transitive structures. Mutatis mutandis this reminds us of such dualistic concepts as wave-particle in physics. Such dualistic concepts I call

8. Perlmutter, David and Postal, Paul. 1977. "Towards a Universal Characterization of Passive". *Proceedings of the Third Annual Meeting of the Berkeley Linguistic Society*. Berkeley, California.

centaurs—thinking of the fabulous creatures from Greek mythology.

B. Discontinuous Constituents in Categorical Grammars

As is well known, categorial grammar is an alternative formalism to context-free grammar. In the past categorial grammar was not very much favored by linguists, but there has recently been a revival of interest in it. So now we have different versions of categorial grammar—a class of categorial grammars.⁹

The attraction of categorial grammar is that any categorial construction consists of a syntactic structure and a semantic structure which is isomorphic to the syntactic structure. Syntactic rules and categories of categorial grammar have a functional correspondence with rules of semantic interpretation. As opposed to categorial grammar, a context-free grammar deals with pure syntax, so the linguist has to develop a semantic interpretation separately.

Categorial grammar distinguishes constituents as operators and operands (or functions and arguments) and includes operations of application for combining the two.

Categorial grammar consists of two components. The first component is a categorial lexicon. The second component consists of a small number of combination rules.

Each entry of the categorial lexicon includes a category, or type, defining the kind of constituent (if any) with which the word in question can combine and the kind of constituent that results.

Using the notation of AUG, we denote terms, that is noun phrases, by T, and sentences by S. These are basic categories, or, as we prefer to say, basic types. All other types are derived from the basic types.

Derived types have the form $O X Y$, which means “an operator which, being applied to its operand X , results in Y .” Put another way, items having types of the form $O X Y$, $O X O Y W$, etc., are to be thought of as operators (or functions) over X . Thus, $O T S$ means “an operator from T into S ”, that is, “an operator which, being applied to a term produces a sentence” (this is an intransitive verb, or predicate). And the type of transitive verbs $O T O$

9. The reader may find an excellent description and analysis of contemporary state of categorial grammars in Segond, Frédérique. 1990. *Grammaire catégorielle du français. Etude théorique et implantation. Le système GraCE (Grammaire Catégorielle Etendue)*.

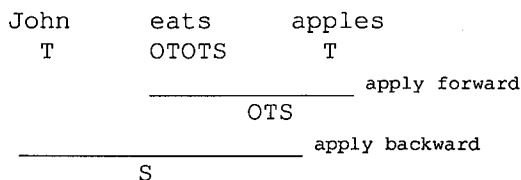
T S identifies them as operators from T into operators-from-T-into-S.

The basic combinatory rule of syntax in categorial grammar, called the *rule of application*, may be formulated as follows:

An operator of type OXY and interpretation M can combine with an adjacent operator of type X and interpretation x to yield a result of type Y and interpretation Mx , the result of applying M to x .

Depending on whether an operand precedes or follows its operator, we distinguish a *backward application* or *forward application*.

The applicative structure of phrases is presented by applicative diagrams. For example:



(1)

The main constraint imposed on categorial grammar is called the *Principle of Adjacency*. It is stated as follows:

Combinatory rules only apply to items which are present in text and are adjacent.

The main problem in categorial grammar is caused by discontinuous constructions. Discontinuous are constructions in which elements that belong together in meaning are separated because of processes such as extraction or coordination.

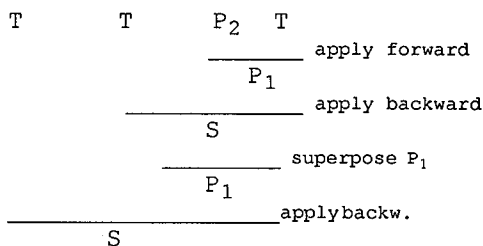
Discontinuous constructions create serious difficulties for categorial grammar because they violate the Principle of Adjacency. Various solutions to this difficulty have been proposed but it is commonly recognized that neither of them is completely satisfactory because they create new difficulties such as, for example, so-called spurious ambiguity.

With my colleague Frédérique Segond, I have developed a solution to the difficulty based on the theory of superposition. Our work involves technicalities which are outside the scope of the present paper. I will only explain a general idea underlying our work.¹⁰

Note that, although, as will be shown, below, the theory of superposition is important for solving the problems created by discontinuous constructions, this theory has a wider significance. As was shown above, superposition is a tool for establishing syntactic connections between words that cannot be directly connected with one another because they belong to syntactically unconnectable types. For example, two nouns, say, *grass*, *roots* can be combined because the adjunct use is superposed on the first one. Two adjectives *dark*, *blue* can be combined because the adjunct-modifier use is superposed on the first one. Without the theory of superposition we cannot produce a complete explanation of the syntactic connections between words even when words are adjacent constituents of a syntactic construction.

Let us now consider a case of discontinuous constituents of a syntactic construction. Let us start with the diagram:

Apples, Peter likes them



(2)

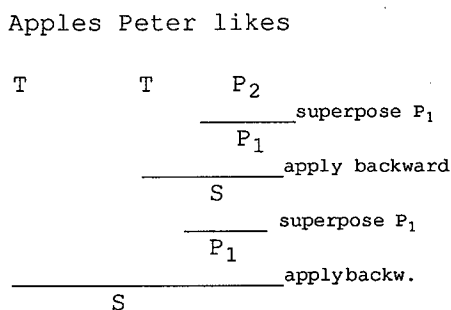
Diagram (2) contains the following abbreviations:

$P_1 = O T S$, $P_2 = O T P_1$.

The sentence in diagram (2) is divided in two parts—topic *Apples* and comment *Peter likes them*—by a process which may be called *segmentation*. Segmentation is expressed by a specific intonation. The topic and comment are adjacent but the rule of application does not apply to them because the topic is of type T and comment is of type S. This case is similar to the cases of two nouns and two adjectives, considered above: two nouns

cannot be combined unless we superpose the use of the adjective on one of them; two adjectives cannot be combined unless we superpose the use of the modifier of the adjective on one of them. By the same token, the topic and comment cannot be combined unless we superpose the use of the one-place predicate on the comment. This process is presented in diagram (2). Superposition is not something artificial. It is a natural process which corresponds to the intuition of the participants of human communication. Since the comment defines the topic it should be considered an instance of a predicate.

Let us now turn to the sentence presented in diagram (3).



(3)

In spite of a superficial similarity, the sentence in diagram (3) is very different from the sentence of (2). The sentence of (2) is segmented; it is divided into two segments—topic and comment. The sentence of (3) is not a segmented sentence; it is not divided into topic and comment. On the other hand, the sentence of (3) is a discontinuous construction, but the sentence of (2) is not. In (3) *Apples* and *likes* are discontinuous constituents because they are separated by *Peter*. And, because of the violation of the Principle of Adjacency, this creates a problem. Diagram (3) presents a solution to our problem.

Because the direct object is not adjacent with the verb *likes*, we cannot get a combination (*likes* + *direct object*) of type P_1 , which could be applied to *Peter* (unlike to what is done in (2)). So we have to superpose type P_1 on type P_2 , which is done in diagram (2). This superposition is quite natural because it is analogous to a very common linguistic phenomenon—shifts from transitive to intransitive, and, vice versa, from intransitive to transitive, under a change of meaning; compare *Simon writes letters every day* and *Simon writes* in the sense “Simon is able to write”, or, *Simon walks every morning* and

Simon walks the dog every morning. These shifts are cases of the superposition of P_1 on P_2 or of the superposition of P_2 on P_1 , depending on which item must be considered the chief variant.

How we determine which items are chief variants and which are subsidiary variants?

To answer this question, let me introduce two concepts: *the range* and *the load*. The range of an item is the sum of all contexts in which the item occurs. The load of an item is the sum of features that characterize the item.

Now we can formulate a semiotic law—*The Law of the Inverse Relation between the Range and the Load of an Item*: The larger is the range of an item, the smaller is its load, and, inversely, the larger is the load of an item, the smaller is its range.

Let us apply the law to our examples. The verb *to write* is mostly used as a transitive verb; its use as an intransitive verb is restricted to smaller number of contexts. Hence the range of the transitive *write* is larger than the range of the intransitive *write*; hence the load of the intransitive *write* must be larger than the load of the transitive *write*: the transitive *write* has only one essential feature—transitivity, but the intransitive *write* must have two essential features—transitivity plus the superposed intransitivity. Therefore the transitive *write* is a chief variant and the intransitive *write* is a subsidiary variant of the verb *to write*. Diametrically opposed to this is the case of the verb *to walk*. The verb *to walk* is mostly used as an intransitive verb; its use as a transitive verb is restricted to smaller number of contexts. Hence the range of the intransitive *walk* is larger than the range of the transitive *walk*; hence the load of the transitive *walk* must be larger than the load of the intransitive *walk*: the intransitive *walk* has only one essential feature—intransitivity, but the intransitive *walk* must have two essential features—intransitivity plus the superposed transitivity. Therefore the intransitive *walk* is the chief variant and the transitive *walk* is a subsidiary variant of the verb *to walk*.

This law is similar to the logical law of the inverse relation between the content and the extension of a concept: the wider is the extension of a concept, the narrower is its content, and, inversely, the wider is its content, the narrower is its extension.¹¹

After superposing P_1 on P_2 of *likes* and applying it to *Peter* we get the phrase *Peter likes of type S*; by superposing P_1 on *S* we make it possi-

11. Cp. Shaumyan, op. cit., p. 122–23, 138–39.

ble to apply Peter likes to Apples.¹²

The scope of the present paper does not allow to discuss further instances of the use of the theory of superposition to other syntactic problems, in particular to the problem of ergative constructions. The discussion of these questions of syntax may be found in my book and in the joint paper with Frédéric Segond, quoted above.

Superposition in Lexicon

Superposition is a universal process that concerns not only syntax but also lexicon. In this section I will explain what I mean by superposition in lexicon.

We must distinguish syntactic contexts and semantic contexts. Syntactic context involves the superposition of one type of part of speech on another type. Semantic context does not involve the superposition of types; it involves the superposition of the meaning of one word on the meaning of another word. This kind of superposition we may call *semantic superposition*. Semantic superposition concerns not only the lexical meaning of a word but also its non-syntactical meaning. For example, the inherent grammatical meaning of the present tense of Russian verbs is the present; this meaning is inherent because it does not depend on a context. But due a semantic context Russian verbs in the present tense may acquire the meaning of the past or the future tense.

Here are examples of the superposition of lexical meanings. The inherent meaning of *lion* is the name of an animal. But in combination with some words it acquires the meaning "a famous and important person" as in a *literary lion*. The inherent meaning of *black* is "of the darkest color" but may acquire the meaning "very bad" as in *black despair*.

The chief variant of a word is characterized by its inherent meaning, while its subsidiary variants are characterized by its acquired meaning. We see why this is so: the range of the variants with acquired meanings is smaller than the range of the variant with an inherent meaning.

Note the parallelism between syntactic and lexical superposition. In syntactic superposition we identify a given part of speech with another part of

12. Further discussion of the application of superposition to the knotty problems caused by discontinuous constructions is found in Shaumyan and Segond, op. cit.

speech; in lexical superposition we identify the meaning of a given with the meaning of another word or phrase. In both cases we have a syncretism—an initial type or an initial meaning are not lost but are underlying the new types or new meanings.

The definition of the semantic contexts for lexical meanings of words is an arduous task. But it is one of the most important future goals of linguistics.

INAUGURAL LECTURE

THE SOURCES OF LINGUISTIC PATTERNING

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I would like to begin with a little story. I teach a course in information structures, in which we look at information structures of various kinds, comparing and contrasting them to languages. Sometimes I ask students to bring in examples of interesting and/or puzzling information structures. On one occasion an Aggie transfer student presented the example of the thermos bottle as a puzzling information system (actually, this particular example is a fictitious one, but the context is real). He pointed out that you can put coffee into it in the morning for your lunch, then a few hours later at lunch time, when you pour it out, it is hot. On the other hand, if you put in a soda, then a few hours later, when you pour it out, it is cold. The puzzle is, as he put it, "How does it know?"

The relevance of this story will become clear at a place to be identified below.

Meanwhile, I would like to present four questions relating to linguistic patterning for your consideration:

- (1) What is linguistic patterning?
- (2) Why is it there?
or: How did it get there?
- (3) What is this "there" of the second question?
- (4) What should we do about conflicting patterns?

For the first question we don't have to give a formal answer. As linguists we all have some idea of what patterning is, and those more or

less vague ideas are just right for our purposes. It will suffice for now just to give a few examples of patterning in language, which we may use for the explorations motivated by the other three questions:

- (1) Categories. There are several different kinds, at different levels. As a prototypical example, let us consider the contrasting categories of noun and verb. Among the phenomena relating to categories which cry out for explanation are prototypicality and fuzzy boundaries, and the question of why the distinction between nouns and verbs is universal (pace those linguists who think it is not).
- (2) Iconism of phonological features and of complex phonemes such as /sl/ in slip, slide, slurp, slosh, etc.
- (3) Symmetry in phonological systems. For example, a language with three front vowels is likely to have three back vowels. Many examples are seen in Hockett's "Manual of Phonology" (1955).
- (4) Word-order phenomena. In particular, we may consider the correlations of the kind described by Greenberg and others.

Some well-known word-order correlations can be summarized as follows:

- | | | | | |
|-----|-------|----------------|---------------|--------------|
| (1) | S O V | Possessor+Head | Postpositions | Rel.Cl+Head |
| (2) | V S O | Head+Possessor | Prepositions | Head+Rel.Cl. |
| (3) | S V O | " | " | (vary) |

As languages of type (1) we have Japanese and Korean. Type (2) is illustrated by Tongan, and type (3) by English and Chinese. English has relative clauses after the head noun, Chinese before, separated by de. Finnegan and Besnier comment as follows in their textbook (1989:264):

This fact is remarkable in that it applies to a great many languages whose speakers have never come into contact with each other. It is thus likely that underlying this ordering principle there may be some cognitive process shared by all human beings.

The second of the questions raised at the outset requires no elucidation here, but it is a major concern of much of this paper.

The third question involves an epistemological problem: Does the fact that linguists can "find" (or posit) patterns mean that they are "there"? If so, where is this "there"?

The fourth question concerns patterns which allow alternative analyses. They thus naturally lead to the question of which analysis is the right one; or which represents "God's Truth". An example much discussed in the literature of the forties and fifties concerns the past tense forms of strong verbs in English, like take:took. Another example is the question of polysemy vs. monosemy, and take may also be used to illustrate this one, as in taking the books and take this example. As a third example we may consider the question of participant roles in clauses. We may observe that many different analyses have been proposed over the past thirty years.

These, then, are the questions. Now, what about answers?

We may first consider the third question, as a partial answer is easy to come up with, and it will help us to find answers to the other questions. I would like to propose (or rather to repeat here the proposal I have made previously) that the only "there" that can realistically be supposed to exist is cognitive. The only God's Truth that is relevant in this context is the cognitive system of the human being.

Hocus-pocus linguistics, most versions of which are also known as taxonomic linguistics, avoids supposing that there is such a thing as a linguistic system, as a reality. It concerns itself just with classifying various manifestations of linguistic systems, declining to say anything directly about the systems themselves. Although it has often been adversely criticized, taxonomic linguistics is a perfectly respectable pursuit. It deserves criticism only when it makes statements to the effect that such and such is so and so. It has no right to use the word is in this way since it is supposed to be refraining from making claims about linguistic reality. To assert that a linguistic system has a certain form, or that a feature of structure is such and such, makes sense only in a God's Truth frame of mind. By the way, generative grammar, despite its disclaimers, and despite its harsh statements about taxonomic linguistics, has never shown itself to be other than another form of taxonomic linguistics.

Now if there is such a thing as a linguistic system, it seems that the only place it could actually operate is as a part of a mental system. Such a mental system is either human or, some might claim, a computerized

simulation of a human mind, or, some might claim, the minds of other intelligent beings such as angels or extraterrestrials, who may or may not be classified as human. Such possibilities need not concern us here if we can simply agree that for the present general state of knowledge the only place a linguistic system is generally known to be able to operate is in the human mind. In any case, that locus must surely be regarded as the primary one for human languages. Thus a claim about the nature of the linguistic system is also a claim about the human mind. Or, to avoid the confusion that could be brought about by irrelevant connotations of the term 'mind', it might be better to use a more neutral term and to say just that a linguistic system is a part of the information system of a human being.

We are thus led to part of the answer to the first question (what is linguistic patterning?). Linguistic patterning is ultimately cognitive patterning. The word ultimately here is not idle: Some patterning has its more immediate sources in the changes that take place through the passage of time. Much of what has been described with phonological rules has its only direct reality as etymology, involving from internal reconstruction. But ordinary speakers of a language are not etymologists; they just learn forms as wholes.

We also have a sound basis for exploring the second question, that of explaining linguistic patterning. The explanation must be largely cognitive, and partly diachronic in that some patterns are there as residues left by the flow of time.

And then we are also provided with the proper attitude for considering the fourth question, that of conflicting analyses, and this attitude leads us easily to the answer: As the realities behind linguistic patterning are ultimately cognitive, we have two plausible means of reconciling the differences:

- (1) It could easily be that the cognitive systems of different speakers have the relevant information differently organized;
- (2) It can easily be the case that the typical individual speaker has the relevant information redundantly represented, reflecting two or more analyses within the same cognitive system (Lamb 1991).

It is thus a mistake to suppose that we must choose between competing analyses, as the two or more analyses may both/all be reflecting some cognitive reality.

Let us now look more deeply into the question of why the patterning that we find is there, the question of the source of linguistic patterning. We may first consider the question of categories like noun, verb, etc.

We recall that Miss Fidditch, the prototypical high-school English teacher, has her "parts of speech" and that a noun, according to her tradition, is the name of a person, place, or thing. We also recall that the structural linguistics of the middle part of this century took exception to this characterization and insisted that the only way to determine such categories was through distributional criteria.

I am going to suggest that the rejection of Miss Fidditch's criteria was too hasty. But that doesn't mean we can accept the traditional statements without amendment. It is not the noun, but the noun phrase, that names a person, place, or thing. (And of course, the noun phrase may also name multiple instances of a person, place, or thing.) A noun, rather, names a CATEGORY of persons, places, or things, unless it is a proper noun. The rest of the noun phrase, in particular the determiner, is what narrows down to one or more members of the named category. Miss Fidditch didn't make the same mistake with respect to verbs, but many contemporary linguists do, when they suppose that verbs designate events. Rather, a verb designates a PROCESS (as Halliday correctly observes), and it is the VERB PHRASE that designates an EVENT (or more than one). It is the other parts of the verb phrase, in particular the aspect and/or tense markers, which narrow the specification to a single event or more than one.

That having been said, we may now observe what is right about the traditional view of the "parts of speech": It is based on conceptual rather than upon distributional criteria.

Everyone has a cognitive system, an individual information system that is embedded in a world and which the individual uses to cope with the world. That world that the cognitive system has information about is not just external to the body, since it includes information about the body itself: feelings of hunger and other sorts of feelings, knowing where arms and feet are and what condition they are in and so on. From cognitive linguistics we get plenty of evidence for conceptual structure. Speaking loosely (ignoring the distinction between conceptual sections of the cognitive network and the "concepts" which we take them as representing) we may think of conceptual structure as the system of concepts which are connected to the lexemes of the language(s) of the person. Concepts are also connected to perceptual systems such as the visual, auditory, and somasthetic.

The conceptual system can be modelled as "lying" at the top of the linguistic system, and also at the top of the visual system. It can be considered as being at the "top" of all the perceptual and motor systems and language (which is really not just one system, by the way, but that is a topic for another paper). So modelled, it is the integrative system which provides linkages among these various systems, along with the linkages of concepts to one another.

In the previous paragraph, the term "top" is in keeping with the modelling orientation according to which the sensory and motor organs are at the "bottom" and the more abstract layers of the cognitive hierarchy are at successively "higher" layers as they are successively farther from the sensory and motor interfaces. As a general operating principle of cognitive development we may suppose that cognitive structures are largely built from the bottom up. For example, a child learns phonology before morphology, and learns to function with the lower, more basic, levels of visual perception before becoming adept at higher levels, and so forth. Thus the conceptual system, being at the top, is by and large relatively late in its development, and in fact most learning after childhood is in this system.

Among the perceptual systems, the most important, for those not blind since birth, is the visual. The conceptual system must be heavily dependent on the visual system ("V"), from the point of view of both development and its later functioning. A number of casual observations support this supposition:

- (1) V gets well developed before the linguistic system in the cognitive development of the child.
- (2) More cortical tissue is devoted to V than to any other perceptual system.
- (3) V is able to handle great complexity, evidently much more than the other modalities. This property is directly related to complexity of the visual field --- three dimensions plus motion; depth perception; color; etc.
- (4) Of particular interest: Visual perception, for its own purposes, makes a distinction between things and processes like that we find in language. This distinction is necessary in order to allow the recognition of things in different positions and engaging in or engaged by different

processes --- as we know the human visual system is capable of doing.

- (5) The systems of other mammals appear to have this same property (and of course they don't have language as we know it); for example, a pet cat or dog can apparently recognize its master visually although the master is in different positions and/or engaged in different activities.

These same observations may be made with respect to the somasthetic system, which is also of great importance in development. The integration provided by the conceptual system can be considered to include the associations between the visual and the somasthetic and other systems. Note that cats and dogs recognize their masters also by smell and sound, etc. Evidently mammals can have conceptual structure in advance of language, as most of them don't have language at all as we know it. Blind people also have conceptual structure, based on other modalities, but perhaps using the same higher-level nections that would have visual uses in people with sight.

Thus it appears that the basic distinction between things on the one hand and processes and relationships on the other, which we find reflected in the distinction between nouns and verbs in languages all over the world, is not just a property of language, nor just of conceptual structure, nor of the world. The distinction between nouns and verbs is in language as a reflection of the corresponding distinction in the conceptual system, but it is in the conceptual system as a reflection of the higher levels of V and the other perceptual systems. We can safely assume that it was already there in the perceptual systems before the development of the parts of speech. (In this case, the 'before' is both ontogenetic and phylogenetic.)

The categories called "parts of speech" in traditional grammar may therefore be seen to be based on what we might call "parts of thought" (i.e., categories of the conceptual system), which are in turn based largely on what we might call "parts of vision". Because of the great importance of V, it appears likely that what we may call conceptual structure has more connections to V than to any of the other perceptual modalities.

As suggested above, conceptual structure may be seen as the subsystem which provides for the integration of all the subsystems; their upper levels all converge and overlap in/as the conceptual system. For this way of speaking of the interconnections of the various subsystems it makes sense to speak of conceptual structure as lying outside language, for then the linguistic system is another of the several systems which are integrated

by the conceptual system. According to this view, the connections of all the other subsystems, including the linguistic, to the conceptual are upward to the conceptual system, which thus lies at the top.

This type of organization of the cognitive model allows it to readily account for an important type of flexibility that seems to be present in mental systems, in that it allows properly situated upper level latent nections to be available for connection into alternative modalities, by virtue of their potential downward connections. Thus the organization might be such that, for example, a given latent nection could be brought into service for perhaps any of (1) high level lexeme, (2) concept, (3) high level visual percept.

As we have seen, the basic distinction between noun and verb has a parallel in the visual system and in fact seems to be based, both phylogenetically and ontogenetically, on the corresponding distinction in the visual system. But there is more to the story than that. From casual observation of our own experience and what others seem also to experience, it is apparent that the visual system distinguishes not just (what we therefore come to think of as) things and movements, but also various other "parts of vision", including

- (1) as properties of things (cf. modifiers, in language):

Colors,
Shapes,
Sizes,
Textures,
etc.;

- (2) as properties of processes (cf. adverbs and aspect markers in language:

Velocities,
Different kinds of motion,
Presence or absence of
interruption or hesitation
or repetition,
Other kinds of complexities.

Were it not so we would lack the ability to visually identify (what we understand as) things and processes. For example, even a young child, and even animals without language, can recognize objects in motion, apprehending that it is one object moving rather than a series of similar objects each of which appears for a moment and then disappears while the next then appears in an adjacent location. And even a young child can

recognize its mother in a variety of positions, movements, clothing, and distances; it is able to recognize a process of eating as such even though it is a series of repetitions of a complex combination of processes performed now by one now by another person, and on different edible objects; etc. It also recognizes colors and shapes of objects as distinct from those objects and processes. And so forth.

In addition we have various locational relationships, such as "in", "on", and so forth. These are visual relationships which parallel prepositions (or postpositions) in language.

Moreover, these various categories --- things, processes, relationships, etc. --- which parallel the traditionally recognized parts of speech simply because language evidently developed on the basis of other cognitive systems that preceded it, are not just categories of visual perception. Different sizes and textures are experienced through touch and handling; locational relationships are experienced through motor activity combined with perception, as in walking into a room. Thus we are operating in the world and thinking about it with the aid of categories of conceptual structure (as integrator) which are supported by corresponding categories in various of our cognitive subsystems.

Thus it would appear that our 'parts of speech' are just reflections of 'parts of thought' (conceptual categories). The question of syntactic categories is therefore not just a linguistic one. We are talking about cognitive categories of a more basic and more general kind. The lexical system is merely a system which provides labels for the concepts of the conceptual system and the percepts of the perceptual systems.

We might note also that these distinctions among cognitive categories are cognitive or mental distinctions which at best only indirectly reflect distinctions of the world itself. Every human being is a model builder, building a model of the world and the self and of the self's position in that world. This model-building process, largely unconscious, begins in infancy, perhaps even before birth, and continues into adulthood, to some extent even to old age, subject to the limitations of senility. In trying to understand how it is that different peoples of differing linguistic and cultural backgrounds seem to have different mental models of the world (cf. Whorf 1956), we are led to an appreciation of the fact that any mental model is necessarily a simplified model of what it is attempting to represent and is thus necessarily incorrect to a greater or lesser extent. The systems of different cultures are different simply because they are imperfect in different ways.

Our thinking works along with our senses to give us pictures of the world. We believe that we have a lot of knowledge of the world, but to the extent that it is not accurate what we have is illusions rather than knowledge. Such deviations from accuracy result from properties of how the cognitive system operates. Considering the cognitive system as a network having properties suggested by neural net models or relational network models (as justified below), its integrative structures are necessarily constrained to use three basic strategies, each of which is indispensable to the operation of the system, yet each of which involves simplification of what it is attempting to grasp. These basic modelling strategies result in unconscious assumptions about the world. That is, the mental system, by its nature, assumes

- (1) the existence of boundaries,
- (2) the existence of enduring objects; and
- (3) the existence of categories of such objects,
as well as categories of processes and
relationships in which the assumed objects
are assumed to participate.

Without such assumptions it can't operate at all. They are consequences of the built-in properties of both our perceptual systems and our conceptual systems. They are thus involved in all our efforts to understand anything.

Accordingly, we may observe that the basic distinction which our cognitive systems recognize between things and processes is not a distinction of the world but of our cognitive systems. If we look more closely at the world (fortunately, our minds do give us the ability to look more closely in order to refine our assumptions), we find no boundary between things and processes, for there are intermediate phenomena which could be classified either way, such as thunder and lightning. In fact, if we look closely enough, we find no things at all, for the assumption of enduring objects is one of the byproducts of the functioning of our cognitive networks. (Not everyone is willing to look that closely.)

It is also a part of the overall strategy of our cognitive systems that they tend to hide themselves from us, to make us believe we are operating directly with the world rather than with our cognitive models. So it is that one needs to be careful in interpreting Miss Fidditch's definition of the noun as the "name of a person, place, or thing": In a cognitive interpretation, one should not suppose that the lexemes are directly connected to things of the world. Rather, they are connected to concepts, which are in turn connected to percepts, which (through several perceptual

layers) are connected to sense organs, which get stimulated by "things". Nouns --- or rather noun phrases (cf. above) are thus several steps removed from "things".

Why the quotation marks around "things" in the preceding sentence? Because there are no such things as things unless/until "they" are given that status by the cognitive systems of people. Saussure was not quite correct in his well-known assertion that other sciences (than linguistics) work with objects given in advance (Saussure 1916, p. 8 in Baskin translation; cf. Lamb 1991). On the other hand, Lao Zi did have it right when he said

有 名 萬 物 之 母
yǒu míng wàn wù zhī mǔ
have name 10,000 thing 's origin

"Naming is the origin of all particular things" (according to Stephen Mitchell's translation, 1988), if we suppose that under "naming" (you míng) he included conceptualizing.

The foregoing observations lead us to another part of the explanation for why linguists find patterns. It is a simple consequence of the fact that people's minds are predisposed to finding patterns, to the extent that they IMPOSE patterns even on chaotic material. The imposed patterns come from other patterns previously learned. The tendency of ordinary people to impose patterns from their past experience is clearly seen in folk etymology. Thus in naming diseases some less educated Americans use terms like fireballs of the universe for fibrosis of the uterus, and smilin' mighty Jesus for spinal meningitis. Similarly, as linguists are people too, they too impose patterns, but of a different kind, based on their own peculiar past experience as linguists. Much of what we read in their works on linguistic theory and their descriptions of linguistic phenomena is coming more from their own minds, based on their past experience encouraged by their imagination, than from the actual linguistic data they are attempting to observe.

Another source of linguistic nonsense is INTROJECTIVE MODELLING. Recalling that the underlying real basis for linguistic patterning is cognitive, we must recognize that patterns which we find in linguistic data give evidence for the underlying cognitive reality, but do not in themselves constitute that reality. Here is where we meet the relevance of the story about the thermos bottle. The Aggie was failing to make the distinction between what the system does and what the system is. It is the same mistake as failing to distinguish symptoms from the disease.

Another example of this phenomenon resembles more closely the practice of introjective modelling. This one concerns an Aggie (also fictitious) studying mechanical engineering. For his term paper he chose to do a research project on toothpaste. He observed that toothpaste comes in a long flexible cylinder. He carefully squeezed out an entire tube of toothpaste on a carefully prepared extended sheet of paper and measured it and found that it was 4.32 meters in length. He then set about trying to figure out, as he put it "How do they get that long cylinder in there?" This is **INTROJECTIVE MODELLING** --- building a model of a system such that what comes out of it must have been in there. It is **INTROJECTING** outputs of the system into the model.

Introjection is the opposite of projection. Introjective modelling in cognitive science puts external features --- features of outputs (and/or inputs) --- into models of the mind. Introjective modelling in linguistics introjects external features into internal representations and/or into models of linguistic structure; for example, it leads to the supposition that because we find words in the outputs of humans, there must be words within their cognitive systems. In particular, it identifies linguistic expressions (especially written expressions) with elements of linguistic and conceptual structure. A consequence is the failure to recognize linguistic structure itself. This kind of modelling, while evidently erroneous, is nevertheless widely used in linguistics, even among linguists who would like to make cognitive claims for their models.

To put it another way, we need to distinguish between two kinds of linguistic models.

The purest kind of introjective model would be that which makes the cognitive system like a vending machine: what comes out is just what was in there. We can refer to models of this type as "What You Produce Is What Was In There" models, or "WYPIWWIT" for short. The Aggie who studied toothpaste was operating with a WYPIWWIT model.

In contrast we have the "WYPICOTS" model, or the "What You Produce Is Created On The Spot" model. Evidently the actual human being is a WYPICOTS system. We can verify that conclusion by observing that we can produce a given word, say 'cat', as many times as we want without depleting our ability to continue producing it. In fact, the more we use a given lexeme, the more easily it is used in future; that is how new lexemes go from uncomfortable and/or unattractive to commonplace --just through repeated use. A cognitive model of language should therefore be consistent with this observation.

Somewhat closer than the vending machine as a metaphor for the speaking human is the factory. Such a system is also of the WYPIWWIT kind, but that output exists as such only after the final phase of production; before that it exists only in unassembled parts. Production consists of moving things around, attaching them to one another, and so forth. The factory with an assembly line has evidently been an important metaphor in the background of thinking of generative grammarians. Their grammars have symbols, which are put together, moved around, replaced, and so on, resulting finally with a finished sentence in phonetic form, which can then be put out.

Let us consider some consequences of introjective modelling in linguistics. Many of these "Illusions of the Grammarian" come from introjecting written symbols into linguistic models. This error is the origin of grammars made of symbols and rules. Observe that the introjected written notation has its origin as a means of representing speech, which is the output of linguistic systems and is not present within the systems themselves. To suppose that phonological symbols or rules which include such symbols are present in the cognitive system is the same as supposing that toothpaste has a cylindrical form inside the tube.

In cognitive linguistics we try to construct a model of the human information system which makes linguistic processing possible. This system is internal to humans. It would make no sense to suppose that within that system are symbols occurring in linear arrangements as in ordinary writing or as in symbolic notation. The mind does not have miniature pencils and paper, nor chalk and blackboard, with which to write such strings of symbols; nor does it have eyes to read them if they could be written. When a person speaks, it is not the case that he writes strings of symbols on some miniature internal surface with some miniature writing instrument, then goes through a series of rewriting operations and finally puts them out of the mouth, in the manner of a vending machine.

What comes out of the mouth is not visual symbols anyway, but sounds; and they do not come out prepackaged as from a vending machine; we do not have sounds stored in our heads (there is no air in there to vibrate). Rather, they are produced on the spot, by the motions and positions of the organs of articulation, which are operated by muscles, which in turn operate because they are stimulated by activation of nerve endings attached to them. And those nerve endings are activated by virtue of their connections which allow them to receive activation from points further within the information system. Such activation requires connections from such points; for example, from a morphemic nectin for 'ten' to a phonological nectin for 't' etc. And that is (part of the reason) why a

network diagram is a more direct depiction for cognitive linguistics than a symbol-based description (cf. Reich 1973).

Some illusions with quite serious consequences result from the influence of various properties of written expression, especially its linearity. To elaborate on a point made in a previous paragraph, linguistic rules are commonly based on logical or mathematical notation, which in turn is derived from alphabetic written language, which is derived from speech, which is the output of a linguistic system and not part of the system itself. How then could we expect a system made of symbols and rules to accurately reflect the structure of the cognitive linguistic system?

Process description as a means of handling alternation in linguistic structure is the example par excellence, whose erroneousess was already remarked upon by Baudouin de Courtenay over one hundred years ago, but to little avail.

Some further examples of errors resulting from introjective modelling are mentioned briefly here without elaboration: The standard examples of morphophonemic alternation in English, involving t:d for the past tense and s:z for the plural of nouns and the third person singular of verbs are not morphophonemic at all! They are illusions of morphophonemic alternations resulting from an introjection of linearity based on the linearity of alphabetic writing. When devoicing occurs in a postvocalic consonant cluster in English, it only occurs once and remains in effect for the whole cluster (Lamb 1966a). To suppose that it occurs repeatedly with each successive segment is to introduce a nondistinctive feature at the phonemic level.

A similar case is the abandonment of the distinctiveness principle by Chomsky and Halle based on their argument regarding Russian obstruents. They correctly saw that there was something fishy with the traditional solution, but they were so committed to linearity that they had to find the culprit elsewhere (the "biuniqueness" principle) --- even after the correct solution was explained to them repeatedly. (Cf. Lamb 1966a, Lamb and Vanderslice 1978)

And in general, the properties of Item-and-Process Models reflect introjective modelling. If one treats such models as just taxonomic, no harm is done. But linguists are very easily led to abandon such caution (Cf. Chomsky 1965: "These mental processes ..." with reference to the descriptive processes of his rewrite rules).

Another example is compensatory lengthening, treated beautifully in a recent paper by Toby Griffin (1989).

But there is another problem of symbol-based systems, perhaps even more devastating for them. If the cognitive system consists of symbols, then there must be a little homunculus in there to interpret and operate upon those symbols (for example, to rewrite, permute, delete). If that is the case, then what we would like to know is how that homunculus works. If its system is also made up of rules and symbols, then it has to have an even smaller homunculus within it. Sooner or later in this progression we have to have a system actually capable of interpreting symbols, and one which is not itself made up of symbols, hence not of rules either. Since such a system is ultimately necessary anyway, why not let the cognitive linguistic system itself be of such a type?

If the linguistic system is not made of symbols and rules, but is rather a system capable of interpreting symbols, what is it made of? One approach to finding the answer --- possibly the only fruitful one --- is to start from the basic structural elements which have been recognized in linguistics and to carefully analyze the relationships among them, without using any misleading notations imported from another field, such as symbolic logic --- as any notation not derived from such analysis itself is likely to be misleading. In particular, a detailed analysis of the various ways in which morphemes of languages can be related to phonemes will result in identification of various relationships. Such analysis can be extended to relationships among other linguistic elements. Eventually it results in redefining the classical concepts of morpheme and phoneme and other linguistic elements. The essence of the approach is to concentrate on relationships without preconceptions about whatever form or substance, if any, such units as morphemes might actually have.

We may then devise a notation specifically suited to plotting such relationships, a notation system without irrelevant properties appropriate to some other field. The result of such analysis is that such structural units as morphemes are nothing but points in a network of relationships; that, like the brain in which it is evidently embedded, the linguistic system is a network. Its information is in the form of connections rather than symbols. A connection from perception of a symbol to the set of concepts or images which embody its meaning within the cognitive system is precisely what provides the system with its means of interpreting symbols presented to it from the outside.

The view that a linguistic system is properly seen not as symbols or objects of any kind but as a network of relations was proposed long ago by Saussure (1916), was elaborated by Hjelmslev (1943/1961), and has often been given lip service by many other linguists, including Chomsky. A notation system to implement this approach, called relational network

notation (Lamb 1966b), was developed as an adaptation of Halliday's notation for his Systemic Grammar.

While symbolic notation relies on symbols as essential ingredients of the structure, in network notation alphabetic characters are present only as labels to aid the reading of a network diagram, not as structural elements. The structure is represented by the lines and nodes of the network.

The tenacity of symbolic notation in the face of its cognitive inappropriateness is largely a result of its familiarity. It uses notational devices with which we have been familiar since childhood and to which we are accustomed through repeated use. It is pretty much like reading ordinary written text in English. Moreover, it is well adapted to our visual perception system, perhaps the most highly developed of our various perception systems, one which allows us to receive comparatively enormous amounts of information in very short periods of time, and which very easily, even automatically and unconsciously, recognizes different tokens of the same shape as representing one and the same item. Repeated occurrences of the same symbol, for example "t", are apprehended as instances of the same element. The essential property of their interconnectedness, shown explicitly in a network diagram, is simply taken for granted, at a subconscious level, by our visual perception systems, when reading descriptions in symbolic notation.

Using this same perception system for reading a network diagram, on the other hand, our eyes must laboriously trace the lines from the upper nodes to the lower ones in order to identify their end points. In this operation, labels can be of considerable help, but of course they are not part of the structure -- in fact they are included as aids to the reader just because of this difficulty.

Now in actual neural networks the basic structural unit is the neuron. In the abstract models of cognitive linguistics known as relational networks the corresponding fundamental unit is the nection. The correspondence is far from being a direct one in the case of the usual form of relational network notation. Its nections are more abstract. Simple nections of this system are bidirectional and may be analyzed into pairs of one-way nections in a less abstract model. Also, the ORDERED AND and the ORDERED OR of conventional relational networks must have their ordering specified in some explicit way in a less abstract model; and the UNORDERED AND of the less delicate model, in the direction of perception or interpretation, must be replaced by a threshold node such that it can be satisfied if only most but not all of its incoming lines are active. Such a less abstract -- or more "delicate" -- model comes closer to being a neural network model, but even at this level it is probably desirable to maintain

the distinction between NECTIONS and NEURONS (although most neural network modellers fail to do so and misleadingly refer to their models of neurons as neurons).

In any case, we may say that the typical nection --- and likewise the typical neuron, as we understand the functions of neurons (for example as described by Konorski 1966) --- has either of two major functions: INTEGRATION and DISTRIBUTION. As an integrative structure in perception or interpretation, the nection allows a combination or selection of features to be apprehended as a unit. As a distributive structure it allows whatever it has integrated to be treated as a unit to be distributed to more abstract integrative units at the next higher level of integration. Among the integrative units we may distinguish two types: (1) those with a relatively high threshold, which require a combination of features to be simultaneously present; and (2) those with a relatively low threshold, which are able to treat a variety of alternatives as equivalent. The latter may be called EQUALIZERS.

The threshold node imparts automatic flexibility in recognition/perception/interpretation, as it accepts input from (typically) a relatively large number of properties but is satisfied by any of various subsets of those properties, including particular subsets that could not have been foreseen. A recent story in *The Wall Street Journal* (August 4, 1992, p. 1) gives the example of a letter addressed to the "Blowing Air & Space Co. in Hunter, Ala." which was correctly delivered to the Boeing Aerospace Corp. in Huntsville, Alabama.

The threshold feature of the integrative units also imparts to them the ability of responding differentially to different subsets of properties, more strongly if the threshold is strongly satisfied than if it is only weakly satisfied. This feature of the network model allows it to account for prototypicality phenomena, as the prototypical cases are those which strongly satisfy the threshold. It also is a model which does not recognize fixed or even definite boundaries for categories. It also provides for the automatic operation of what we loosely understand as analogical reasoning, in which prototypical cases can serve as exemplars for newly encountered cases.

Let us now briefly consider learning. It involves changes in the network, mainly of three kinds: (1) the formation of new connections among nections, (2) changes in the strength of connections, (3) changes in threshold functions. The first of these has two main subtypes, one for adding new connections to nections which have already acquired some integrative function --- these may be called ACTIVE NECTIONS ---, the other being the RECRUITMENT of previously LATENT nections for specific integrative

functions, by adding connections selected from the large number of potential connections available to a latent nection.

As a consequence of the learning processes and of the flexibility provided by threshold nodes --- which typically have a large number of input lines only some of which need to be active to satisfy the threshold to some degree --- phenomena which are similar will automatically be treated as more or less alike. This operating principle is of course appropriate and it tallies with our experience. It may even seem obvious and tautological. But the intent in stating it here is to identify it as an automatic consequence of the structure and operation of the cognitive network. As such, its power as an explanatory principle may go beyond what is apparent at first glance.

First, we should make explicit what is meant by similarity in this statement. It means having shared features, features being represented in the network system by lines connecting to a threshold node. Of course it must be recognized that similarity, if the form of sharing of features, is relative to cognitive systems, in particular to the similar cognitive systems of members of a culture. It is not in the world. This observation helps to clear the above stated principle of the charge of tautology.

We are now ready to embark upon the concluding portion of this study. We have seen so far some partial answers to the question of the source of the linguistic patterning found by linguists:

- (1) Some of it comes just from the minds of linguists themselves. It is thus illusory from a cognitive point of view, except insofar as we are considering the cognitive systems of those linguists.
- (2) Much of it is there because linguistic categories are built on the basis of conceptual categories, which in turn are based on categories established in the perceptual systems, most importantly the visual system, during the process of learning how to perceive.

We are now in a position to give a third partial answer, in the form of a hypothesis. The hypothesis is in two parts, concerning DIVERSITY and SURVIVAL:

- (1) DIVERSITY: You get diversity anyway in linguistic expression, as an automatic consequence of the fluidity of language. For example, in:
 - word order
 - selection of lexemes (note 1)
 - pronunciation
- (2) SURVIVAL: Those variants which have greater survival value are more likely to survive.

We next need to consider (1) processes which lead to development of variants, and (2) properties which confer survival value.

1. Processes which promote development of variants:

- (1) Random variation. It is random from a linguistic point of view, but not from the neurological or physiological standpoint. Such variants are necessarily similar to their bases in that they share neurological or physiological features with them.
- (2) Metonymy -- i.e. production of new expressions which share properties with previously existing ones. A major type of metonymy is metaphor.

These two processes differ in degree, not in kind.

We may next identify consequences of these processes: First, new variants are always similar to previously existing elements, in that they share features with their exemplars. Second, since shared features are the basis of similarity and therefore of substitution, they can "acquire" what appears to be a life of their own. This is how, for example, phonological fragments can acquire meaning --- e.g., sl-, cl-, gl-, -atter, -itter, etc. Such developments provide part of the explanation for iconism in language (onomatopoeia). But the onomatopoetic developments of this type are, by the same token, language specific (cf. Hockett, p.c., 1991).

2. Properties which confer survival value:

- (1) Frequency of occurrence.
- (2) Earliness of learning.

(3) Patterning which promotes ease of learning.

These are all related to learning and reinforcement. Survival value can only be explained as a cognitive phenomenon: Surviving means being reinforced in the minds of people.

Frequency of occurrence is determined by frequency of the conditions — social and environmental and linguistic — for occurrence of the meanings/functions which such forms express.

Properties (1) and (2) do not involve patterning. They work against the development and survival of patterning, while (3) promotes such development and survival. But (1) and (2) do not involve development and survival of new forms or patterns, only the survival of old stuff. Thus (1) and (2) explain the irregular forms of a language.

For (3), it doesn't matter whether there are conflicting patterns — mutually incompatible analyses — or multiple non-conflicting analyses. This observation is a consequence of the following principle:

If a form has properties that can lead any members of the community to find a pattern it thereby has survival value.

As a consequence, many of the patterns which are observed by linguists are likely to be cognitively significant in this sense, even if they involve analyses which conflict with analyses proposed by other linguists. (But as we have observed it is not necessarily the case, since some patterning results from survival of old forms and is discovered only by assiduous etymological analysis of a specialist; while other patterns are just projections from the mind of the linguist and are too subtle to be of significance for ordinary people.)

As a further consequence, it is not necessary that a pattern be cognitively useful (by facilitating learning) for all members of a speech community. If it is useful only for a critical mass, that is enough to ensure its survival. That is, if some humans see a pattern in some linguistic data that fact in itself tends to promote the survival of those perceived patterns.

So if we now return to the question posed by Finnegan and Besnier regarding word-order typology, mentioned near the outset of this paper, we see that the answer turns out to be surprisingly simple. The seemingly elusive "cognitive process shared by all human beings" which they posit but fail to identify is simply that cognitive systems support similarity. Transitive

verbs, prepositions, and adjectives are similar in that they all require complements (and in more subtle ways). It is natural, then, that this similarity of functioning will be accompanied by similarity in the expression of that functioning: in all three cases the complement follows the word which requires it. Or in short, prepositions are like verbs and therefore ordinary people will expect them to behave like verbs, and will therefore treat them like verbs.

Note 1. Cf. Bloomfield, *Language* (1933), Chap. 22: Fluctuation in the frequency of forms.

References

Bloomfield, Leonard. 1933. *Language*. Holt.

Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*.
M.I.T. Press.

Finnegan and Besnier. 1989.

Greenberg, Joseph. 1967. *Language Universals*.

Griffin, Toby. 1990. Compensatory Lengthening. LACUS Forum 1989.

Hjelmslev, Louis. 1943/61. Prolegomena to a Theory of Language.
English translation by Francis J. Whitfield, University of
Wisconsin Press, 1961.

Hockett, Charles F. 1955. Manual of Phonology.

Konorski, J. 1966. Integrative Activity of the Brain.
University of Chicago Press.

Lamb, Sydney M. 1966a. Prolegomena to a theory of phonology.
Language.

-----, 1966b. Outline of Stratificational Grammar.
Georgetown University Press.

-----, 1991a. Linguistic model and linguistic thought:
The case of either-or thinking. The 17th LACUS Forum 1990.

-----, 1991b. Objects, Real and conceptual; Boundedness and
continuity in time; Objects of study; The scientific status
of linguistics; Are words real objects or Illusory objects?.
Communications of the Workshop for Scientific Linguistics,
5-9, 9-10, 5-11, 5-12, 5-13.

Lamb, Sydney M. and Ralph Vanderslice. 1978. On thrashing
classical phonemics. LACUS Forum 1977.

Mitchell, Stephen. 1988. Tao te Ching: A New English Version.
Harper and Row.

Reich, Peter A. 1973. Competence, performance, and relational
networks. In Makkai and Lockwood, Readings in
Stratificational Linguistics. University of Alabama Press.

Saussure, Ferdinand de. 1916. Cours de Linguistique Générale.
(Second edition, 1922. English translation by Wade Baskin,
1959.

Whorf, B.L. 1956. Language, Thought, and Reality. M.I.T.
Press.

INVITED LECTURE

PAUL RICOEUR'S PHILOSOPHY AND TEXTLINGUISTIC ANALYSIS

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0. **INTRODUCTION.** Why should anyone give a book review as a linguistic paper at a linguistic conference? Presumably, only if one treats of material of outstanding significance that one fears is being overlooked by others in one's field. Such is the situation here.

Paul Ricoeur is an encyclopedic, Renaissance-sort-of-man of panoramic vision. He is interdisciplinary without being sloppy. On reading him, a historiographer does not have to say, "His theory of historiography is weak but I give him the benefit of the doubt in regard to what he says concerning literary criticism"; nor does the literary critic have to say, "His literary criticism is weak but I give him the benefit of the doubt regarding his theory of historiography". [I have specifically in mind a contemporary writer whose works have met this sort of reception from specialists in various fields].

Ricoeur, on the contrary, has the Midas touch; whatever he touches on in any field turns to gold in his hands. This is true even though his work ranges over ancient and contemporary philosophy, French historiography, literary criticism, development of the English novel, theological studies, and linguistics. The latter, of course, is our interest here.

It occasionally happens that an intervener from outside the narrow confines of a discipline can bring light and air into a discipline that has become inbred and restrictive. So—what does Paul Ricoeur have to say to the linguist and especially to the textlinguist?

Paul Ricoeur's three-volume work, **Time and Narrative** (translated from the French **Temps et Recit**), taken together with two of his earlier works, **Interpretation Theory**, and **The Rule of Metaphor**, presents much material of relevance to textlinguistic analysis. The first work mentioned above occupies my main attention here, but the second contains much to commend itself to our attention, while Ricoeur himself insists that **Time and Narrative**, in a sense, is a sequel to **The Rule of Metaphor**. I will point out below the rationale of Ricoeur's insistence on the latter, viz. the connection between metaphor and plot.

1. **MEANING IN TEXT.** In **Interpretation Theory**, chapter 1, there is strong insistence on the propositional content of the sentences of a text, "the thing as said", its paraphrasability and its translatability. I have been impressed for some time with the relevance of the phenomenon of **translation** to the whole discussion of reader response theory and deconstructionism. However much meaning in the text is denied, the fact remains that texts—even some very

difficult ones—do get translated from one language to the other. In what sense, then, does the 'same text' exist in say, 50 or 100 different languages? That each translation is a **version** of the original document does not change the fact that there is a common content carried over across languages. These considerations turn us back again to the consideration of the propositional content of texts, "the thing as said" (Ricoeur's phrase), and to renewed interest in the classification of verbs in such apparatus as systems of case frames (cf., e.g., Longacre 1983, chap. 4 and 5). On the other hand, in **Time and Narrative**, vol. III, chap. 7, Ricoeur is equally insistent on the crucial importance of reader response to a text: "Only through individual reading does the text reveal its 'structure of appeal'." Again: "A text is incomplete ... in the sense that the world it proposes is defined as the intentional correlate of a sequence of sentences ... which remains to be made into a whole." Perhaps one of his most insightful remarks compares a text to a "musical score lending itself to different realizations" (III.167). But Ricoeur does not consider a text to be structureless. Thus, while emphasizing the reader's role in constructing meaning, he speaks of "the signals provided by the text" and "the instructions in the text" (III.170). In brief, I would summarize his position as including a recognition of the constraining effect of the text in relation to reader response.

This has been my own position for several years now. A textlinguistic analysis cannot hand us ready-made the one and only interpretation of a given text. If this were true, two competent textlinguists would not produce differing analyses of the same text, and by implication somewhat differing interpretations. But, as a matter of fact, competent textlinguists do differ on the analyses of texts. What we can hope, however, is that a careful textlinguistic analysis, one sensitive to the structural clues thrown out by the text or a set of such analyses, could grant us an apparatus which constrains and critiques the range of interpretation of the text.

That reader response has been somewhat ignored by many of us is, of course, unfortunate. What we have reacted against, however, is extreme statements that seem to say that the text is structureless until a reader gets to work on it. At this point, we are likely to get involved in an argument such as the old one "If a tree falls down out in an uninhabited forest and no person or animal is there when it falls, does the tree make any noise as it falls?" Of course, it makes absolutely no noise at all if noise is interpreted as the response of a registering nervous system. Nevertheless, the identical physical sound waves are generated even in the absence of a receptor. Let's settle for the essential fact of the communicative nature of language and for the text as communicative. It must have enough structure to communicate a message. Ricoeur, as I note above, proceeds along these lines. But every textlinguist should read the section I cite above for his mental health—as a protection against ὕβρις and ἄρτη (pride and madness).

2. **THREE-FOLD MIMESIS.** Ricoeur's starting point in **Time and Narrative**, vol. 1, is Augustine's in the **Confessions**, Book 11: **Quid est tempus?** Proceeding on through a careful exposition of this passage, Ricoeur then turns his discussion to a consideration of Aristotle's **Poetics**. Augustine, he notes, discusses time without reference to narrative, while Aristotle discusses narrative without reference to time. Herein lies the opportunity and the challenge that evoked Ricoeur's three-volume work: to join the two discussions and to elucidate a series of aporias regarding time by referring to narrative.

Ricoeur (I, chap. 3) expands Aristotle's concept of mimesis. Mimesis₁, the pretextual world, is the stuff of life and daily experience, as well as accumulated knowledge. It includes an awareness of semiautomatic sequences of actions (spoken of a few years ago as scripts): going to eat in a restaurant, shopping at a supermarket, attending a soccer game, or arranging for and going on an airplane trip. We may well say regarding Mimesis₁: "We are the stuff of which stories are made and our little lives are rounded with prenarrative".

I have a colleague, Hugh Stevens, who writes up the stories of some people in our organization (The Summer Institute of Linguistics) who have led especially colorful and exciting lives. But often when such a person is written up for public consumption, his or her own reaction is somewhat mixed. The biographee is likely to be somewhat put off by the way the prenarrative material of his/her life has been dramatically developed. But as Stevens once complained to me, "I've got to make a **story** out of it!" All of which brings us to what Ricoeur calls Mimesis₂.

Mimesis₂ is the world of plot or, as Ricoeur prefers, emplotment (the act of creating a plot). This builds on the stuff of Mimesis₁, but selects and shapes it for its own ends. A story almost always begins with what we could call 'a broken script', i.e., an inciting incident which involves something out of the ordinary and is unpredictable. A plot is a creative act which joins many disparate elements into a new and coherent whole. This is why Ricoeur believes that his whole great work **Time and Narrative** essentially has grown out of his prior work, **The Rule of Metaphor** (whose subtitle is: **Multidisciplinary Studies of the Creation of Meaning**). Just as a metaphor creates new meaning by joining together disparate elements, so the act of creating a plot draws together many disparate elements into a sort of discordant concordance (Ricoeur's phrase). In its own way, a story creates new meaning.

This struck me with considerable force on my first reading of **Time and Narrative**. Could it be that we as linguists and textlinguists (myself certainly, but equally Halliday and Hasan, T. van Dijk, de Beaugrande and Dressler—and others) while writing of **coherence** in text have failed to appreciate that the prime principle of coherence in narrative is the plot itself. I grant that van Dijk and those who have followed him in the weight he gives to macrostructures come close to making this point, but I believe that Paul Ricoeur speaks to us here with freshness and clarity: the plot is the single most important factor in the coherence of a story; it creates coherence by a **tour de force**.

A word of caution regarding the relation of Mimesis₁ to Mimesis₂: a plot does not simply work up a script (as referred to above) into a story. As we have said, typically a story begins with a broken script (its inciting incident). Then as the story unfolds and the plot thickens, scripts serve to fill in the chinks of the story—whole sequences that can be inferred by the reader without the author spelling them out. This puts the finger on the problem with early AI attempts to generate stories directly from scripts. Plots, far from being predictable sequences, involve a synthesis of the disparate. On this Ricoeur is very insistent.

Mimesis₃ is the world of reader response—as already discussed above. What does the reader do as he reads through a story—especially one of some length, like a contemporary novel? Here Ricoeur is quite specific (and reminiscent of van Dijk). Without using the term macrostructures he notes, in effect, how the reader employs such constructs in the course of reading through a long work: "[in our] traveling the length of the text, in allowing all the modifications performed to 'sink' into the memory, while compacting them, and in opening ourselves up to new expectations entailing new modifications" (III.168). Using such operations as these, the reader constructs the world of the text in front of the text. Then, if the story is stimulating and relevant, the reader lets the world of the text intersect with his own world, i.e. the story affects him. Here, after traveling a great circle through Mimesis₂, Mimesis₃ reaches back toward the elements of Mimesis₁, the stuff of daily life.

3. TENSE AND NARRATIVE. Ricoeur recognizes the crucial role of temporal sequence to narrative. He is, therefore, critical of such approaches to narrative as Greimas' (1970, 1980) and Bremond's (1980). While discussing these approaches at length, he characterizes them as achronological. As such, he feels that these frameworks, at the worst, discuss narrative without recognizing the diagnostic narrative feature of temporal sequence, or, at the best, bring in this feature implicitly without overt recognition of it (II, chap. 2).

Chapters Three and Four of vol. 2 are the textlinguist's delight: 'Games with Time' and 'The Fictive Experience of Time'. Chapter Three begins with a consideration of the structural role of verbal tenses in narrative. Ricoeur takes the contribution of Benveniste (1974) as his starting point. Benveniste (1974: 208-9) drew a distinction between 'history' and 'discourse'. The former, without doing violence to Benveniste's thinking, can be broadly equated with story; the latter, 'discourse', is essentially non-narrative. In the story he pictures the narrator/speaker of the story as keeping himself out of the account (which is, of course, only partially true), while in non-narrative the speaker is involved with his audience. Ricoeur's summation of Benveniste's view of tenses (and persons) follows (II.63):

"Each mode of utterance has its own system of tenses: tenses that are included, others that are excluded. In this way, historical utterance includes three tenses: the aorist or preterite, the imperfect, and the pluperfect (to which may be added the

prospective—'he should have left' or 'he was going to leave'). More particularly, historical utterance excludes the present and along with it the future, which is a present to come, and the perfect, which is a present in the past. Conversely, discourse excludes one tense, the aorist, and includes three basic tenses: the present, future, and perfect tenses. The present is the basic tense of discourse because it marks the contemporaneity of what is stated with the 'instance of discourse'. It is thus bound up with the self-referential character of the instance of discourse. This is why the two levels of utterance are also distinguished by a second series of criteria: the categories of the persons. Historical utterance cannot exclude the present without excluding the relation between the persons 'I' and 'you'. The aorist is the tense of events lying beyond the person of a narrator."

After some attention to K. Hamburger's views (1973), which I will not discuss here, Ricoeur proceeds on to present and criticize the writings of H. Weinrich (1964) on verb tense. Ricoeur's critical presentation of Weinrich, which I will call the Weinrich-Ricoeur theory of tense (I would prefer to say: tense-aspect) seems to me to make three main points:

(1) **tense must be studied in connected text, not in isolated sentences**; hence the need for a "textual linguistics" (Weinrich's phrase) which was soon shortened to **textlinguistics**.

(2) Tenses have special narrative uses but not out of all relation (Ricoeur insists) with time in the real world. Hence, a narrative, which typically is told in past tense—even in futuristic science fiction—presents an accomplished story in a sort of pseudo-past relevant to the time frame of the fictive narrator.

(3) **Narrative use of tense primarily has to do with foregrounding and backgrounding**, i.e. with what Ricoeur calls "the followability" of a story. But Ricoeur is not quite willing to follow Weinrich's exclusiveness dogmatism at this point (Ricoeur II.71): "Weinrich makes no concessions: 'Putting-into-relief is the *one and only function* of the opposition between the imperfect and the preterite in the narrated world'" (Weinrich 1964.117, his emphasis). Finally, Ricoeur makes what is to me one grand summary statement: "We now see the architecture of the whole that in Weinrich's view governs the syntactic articulation of the tenses" (II.71). Again, the textlinguist can find a great deal here to support his contention that textlinguistic structure serves to illustrate dark corners of the morphosyntax.

As a historical note, I mention that such writers as Benveniste and Weinrich are somewhat in the role of the forgotten fathers of what we might call 'the discourse revolution'. We are inclined to latch onto certain brilliant recent writings, e.g. Hopper and Thompson 1980 or Grimes 1975 to the unconscious disparagement of their intellectual forbears.

4. **THREE NOVELS AS GAMES WITH TIME.** In chapter 4 of vol. 2, Ricoeur singles out three works of fiction which not only employ temporal sequence, as any narrative must, but which involve "games with time" (by temporal compression, elongation, distortion, or confusion): Virginia Woolf's *Mrs. Dalloway*, Thomas Mann's *The Magic Mountain*, and Marcel Proust's *Remembrance of Things Past*.

I approached this chapter with considerable interest. My own characterization of narrative as +contingent succession and +agent orientation (in my typology of discourse, Longacre 1983, chap. 1) had proven adequate for the analysis of simple stories in a variety of languages around the world as well as in some English short stories and novels that I had sampled, but would this characterization of narrative prove adequate for the study of "stream of consciousness" novels, such as Ricoeur here discusses? The answer was, as far as I can discern, a gratifying "yes". Thus, for example, Virginia Woolf may "hollow out the moment" (by reflection and retrospection on the part of the character), but the moments are still in chronological succession. Cognitive actions ["Mrs. Dalloway thought about X"], speech acts ["Mrs. Dalloway or someone else said Y"], and actions ["Someone did z"] occur on the storyline in temporal sequence. Furthermore, against the background of Big Ben's tolling out "monumental time" and a royal cavalcade going by, the internal clocks of Mrs. Dalloway and of Septimus, a disoriented war veteran, tick on towards Mrs. Dalloway's evening reception and Septimus' suicide. But even though there are, so to speak, three clocks in this "game with time", temporal succession is present to give the novel its narrative characteristic (Ricoeur, *Time and Narrative* II.101-112).

Ricoeur's analysis of Thomas Mann's *The Magic Mountain* illustrates a somewhat different game with time (Ricoeur, *Time and Narrative* II.112-130). To begin with, Mann's novel nicely illustrates the distinction between narrated time and time of telling. Anyone who has analyzed a story has probably recognized that time intervals in a story often grow more specific and more subdivided as a story progresses. Thus, in the traditional English story "The Three Little Pigs", time intervals are quite non-specific at the beginning: the pigs set out and they construct their houses with materials obtained from those that they meet, but we might well wonder: was each house built in one day? All on the same day? Or are these even relevant questions? Then, at 24-hour intervals ("The next day") the wolf appears at the door of the house of each pig, destroys the house of the first two pigs, and eats them. On the third day, however, the wolf encounters a house so stout and a pig so intelligent that matters have a different outcome. Now the time intervals become much smaller and specific with specification of hours of mornings and afternoons as the third little pig and the wolf try varying strategies on each other.

Some page counting in *The Magic Mountain* yields some rather different results for Ricoeur; here, after the inciting incident of the story, narrated time is progressively abbreviated, according to the stance of the story that patients up on

the hilltop sanatorium experience a progressive loss of the measurement of time. I give here a somewhat lengthy quotation (II: 113):

"The division into seven chapters covers a chronological span of seven years. But the relation between the length of time narrated by each chapter, and the time taken to narrate it, measured by the number of pages, is not proportional. Chapter 1 devotes 15 pages to "the arrival." Chapter 2 constitutes a return through past time up to the moment when the decision is made to undertake the fatal journey; I shall discuss its meaning below. Chapter 3 devotes 54 pages to the first complete day there (the day following Hans's arrival). After this, the 89 pages of Chapter 4 suffice to cover the first three weeks, the exact interval of time that Hans Castorp intended to stay at the Berghof. The first seven months require the 160 pages of Chapter 5. The 196 pages of Chapter 6 cover one year and nine months. The remaining four and a half years take up the 175 pages of Chapter 7. These numerical relations are more complex than they appear. On the one hand, the *Erzählzeit* continually diminishes in relation to the *erzählte Zeit*. On the other hand, the stretching out of the chapters, combined with this abbreviation of the narrative, creates a perspectival effect, essential to the communication of the major experience, the hero's internal debate over his loss of the sense of time."

Here, as Ricoeur observes, there is not only a loss of the sense of the measurement of time in accordance with the way time slows up or ceases to move in the sanatorium, but, again, as in *Mrs. Dallaway*, different clocks are involved: the normal time of those from below (visitors to the sanatorium), and the slowed-up time of its inmates. Indeed the latter hover on the border of eternity—a topic to which Ricoeur devotes some attention here and there throughout his work.

The third novel which Ricoeur discusses, Proust's **Remembrance of Things Past**, is perhaps the most complex game with time of the three (II.130-152). The voice of the hero, the voice of the fictive narrator, and the voice of the author himself need to be distinguished in the course of this long work. Ricoeur points out that the voice of the fictive narrator, "who, more than a hundred times, says 'as we shall see later'" grows increasingly strong toward the end of the novel. The novel begins with archipelago-like islands of childhood memories, which defy sorting out into a orderly sequence (II.135); this is time lost. In the final revelation of the work the hero discovers his vocation: to be a writer. Time lost can be regained by the creative act of writing. As Ricoeur puts it, "In other words, the enigma to be solved is that of the **relation** between the happy moments, offered by chance and involuntary memory, and the invisible history of a vocation" (II.143). The novel brings to the fore time in two guises, **Time the destroyer** and **Time the artist**. But, in the end, even time regained is forever subject to the weariness and terror of oncoming death.

Ricoeur observes that at the end of **Remembrance** the narrative past shifts into the future and the conditional as the hero settles down to his vocation as a writer—working nocturnally like the narrator of the thousand and one nights, in the hope that his craft may be granted reprieve for continuance.

In regard to text genre, it is important to note that Ricoeur, in discussing 'time' and 'narrative' is not using the latter term loosely, but refers it in a specific way to narrative proper. He assumes this in a reference to Biblical literature: "This conjunction in the Bible between narrative and nonnarrative . . . It is noteworthy that monologues and dialogues open, within the purely narrative framework of feigned action, breaches that allow for the embedding of short meditations, even ample speculations about the misery of humanity handed over to the erosions of time" (III.272-3). This summary distinction between narrative and embedded speech is reminiscent of Weinrich's (1964) distinction between narrative and discourse, but Ricoeur in these same pages mentions epic and drama as broadly subsumed under narrative, and lyric poetry, whether song or lament, as distinct from all the above. My own typology of text types (1983, chap 1) draws further distinctions.

5. **CONCLUSION.** To sum up the points I have made, Ricoeur's bringing of light and air into our discipline suggests:

1) A balance between our search for meaning in the structure of the text and an allowance for reader response—but with the former as a constraint and critique on the latter.

2) The feasibility of making the three-fold Mimesis part of our working apparatus.

3) A new recognition of plot as the main principle of coherence in stories (along with the relation of plot to macrostructures in general).

4) A reaffirmation concerning the necessarily textual organization of verb systems: tense, aspect, mood, voice.

5) An appreciation that, although temporal sequence is essential to the very nature of narrative, a good story teller can play fast and loose with time when it fits his purposes to do so.

REFERENCES

- de Beaugrande, R. and W. Dressler. 1972. *Introduction to textlinguistics*. London: Longman.
- Benveniste, E. 1974. *Problèmes de linguistique générale*, vol. 2. Paris: Gallimard.
- Bremond, C. 19890. The logic of narrative possibilities. *New Literary History*, 11, 387-411.
- van Dijk, T. 1977. *Text and context*. London: Longman.
- Greimas, A.-J. 1970. *Du sens: Essais sémiotique*. Paris: Seuil.

- _____. 1980. *Du sens II*. Paris: Seuil.
- Grimes, J. 1975. *The thread of discourse*. The Hague: Mouton.
- Halliday, M. and R. Hasan. 1976. *Cohesion in English*. London: Longman.
- Hamburger, K. 1973. *The logic of literature*, 2nd rev. ed, trans. Marilyn J. Rose. Bloomington: Indiana University Press.
- Hopper, P. and S. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56:251-99.
- Longacre, R.E. 1983. *The grammar of discourse*. New York: Plenum.
- Mann, T. 1927. *The magic mountain*, trans. H.T. Lowe-Porter. New York: Alfred A. Knopf.
- Proust, M. 1981. *Remembrance of things past*, 3 vols, trans. C.K. Scott Moncrieff, Terence Kilmartin, and Andreas Mayor. New York: Random House.
- Ricoeur, P. 1976. *Interpretation theory: Discourse and the surplus of meaning*. Fort Worth: Texas Christian University Press.
- _____. 1977. *The rule of metaphor: Multidisciplinary studies of the creation of meaning*, trans. Robert Czerny with Kathleen McLaughlin and John Costillo, S.J. Toronto: University of Toronto Press.
- _____. 1984, 1985, 1988. *Time and narrative*, 3 vols, trans. Kathleen McLaughlin and David Pellauer. Chicago: University of Chicago Press.
- Weinrich, H. 1964. *Tempus: Besprochene und Erzählte Zeit*. Stuttgart: Kohlhammer.
- Woolf, V. 1924. *Mrs. Dalloway*. London: Hogarth Press.

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RUSSIAN *DAT'* 'GIVE' AND RESTRICTIONS ON GENERALIZATIONS IN ACCENTUAL INNOVATION¹

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1. The immediate focus of this paper is the behavior of the Russian verb *dat'* 'give' and its reflexive congener *dat'sja*, together with their respective prefixed derivatives, in the question of stress placement in their past tense forms. These verbs belong to a small accentual class of verbs prescriptively and historically following a well defined stress pattern across the four past tense forms (masculine, neuter, and feminine singular; plural [all genders]; see below). This paper will examine individual speakers' actual stress placements with the aim of establishing three points: (1) as a background point, contemporary speakers depart from prescribed norms for this class in varying, but significant degrees; moreover, two competing directions of departure can be discerned; (2) not all stem types are treated equally in departing from traditional stress placement, so that one may view hierarchizations of stem types as one factor constraining the departure; (3) both across speakers and, for any one speaker, across different (but related) implementation mechanisms, the hierarchy of stem types is only partially consistent. *Dat'* and *dat'sja* then serve as an example of a more generally significant point, that all elements of the domain of a given change may not be constrained in the same way by a given factor, so that a hierarchization of the elements may not map directly from one aspect of the change at hand to another, even closely and teleologically related one.

C. E. Bazell has argued that the unstated, and usually unrecognized, sets of assumptions underlying much modern linguistic thought and analysis often include an assumption of some sort of consistency or uniformity which inheres across various aspects of language, or which holds between the results of analyses which appeal to disparate criteria (Bazell 1966:271 *et passim*). He argues that convergence as a working principle may be reasonable and valid, but that it is fundamentally fallacious to assume "...a one-one relation between the results of criteria which have not been selected with this end in view" (ibid.:272). The material from which he extracts instances and derivatives of this fallacy all deal with synchronic analyses of particular problems or with theoretical linguistic structure more generally. Thus, the early assumption that a phonemic analysis of a given language based on articulatory features must necessarily yield the same inventory as one based on acoustic features serves as an example of the prototypical fallacy, viz. isomorphism between analyses appealing to different criteria.

One of Bazell's examples touches more closely on the question of consistency across morphological forms. In analyzing French masculine vs. feminine adjectives for their markedness values, J. Cantineau had concluded, through application of Trubetzkoy's version of Zipf's statistical law, that the masculine is unmarked (ibid.:276-77). Clearly operating under the assumption that this markedness relationship must hold elsewhere as well, Cantineau argued that this relationship necessitated abandoning

¹I am grateful to Alan Timberlake and John Dingley for comments and suggestions, both on particular points and on broader questions.

Bloomfield's morphological rule, whereby the masculine is formed from the feminine through a simple final consonant deletion. The fallacy in the argument, similar to that of assumed isomorphism between distinct analyses, is in assuming a unique markedness relationship across various criteria. "But there are many ways in which a form may be unmarked. The more frequent form is unmarked in respect of frequency; the form which serves as simplest starting-point for derivations is unmarked derivationally" (ibid.). It may be that many, or sometimes even all, relationships of markedness will coincide, but it is misplaced to assume that they must.

In historical linguistics, one may usually find correlative assumptions underlying most studies of language change. In particular, there is an assumption of certain uniformity (1) across time, (2) across speakers, and (3) across processes. A fundamental change in Slavic historical morphology, for example, was one in which the endings of the Dative, Instrumental, and Locative plural cases in one Old Russian substantive declension, viz. the *-a* stems, came to apply uniformly to all substantives in Contemporary Standard Russian (CSR) (*-am* / *-ami* / *-ax*, resp.). Resolving questions of which case or which stem type first underwent the change figures prominently in the rich literature devoted to aspects of this change. The evidence adduced presents no consistent picture. The third of Šaxmatov's three proposed solutions, for example, claims that the Instr. of *-o* stems must have been the first to manifest the change, based on the absence of vestiges old *-o* stem Instr. plural endings in dialects where vestiges of old *-o* stem Dat. and Loc. plural endings are found (Šaxmatov 1910). Stang's analysis (1952) of the language of the 1647 translation into Russian of Wallhausen's *Kriegskunst zu Fuß* finds the Instr. pl. the one case form for which the innovative *-a* stem ending predominates (by a considerable margin) for other stem types, and so offers corroboration of Šaxmatov's third solution. Unbegaun (1935), on the other hand, from extensive 16th century textual analysis, finds the Instr. to be the most conservative in manifesting the innovative ending, and so rejects Šaxmatov's third solution.² Besides assuming there to be a unique answer to the question, the extrapolations of findings from later texts (or a single text) back to the inception of a change offer examples of an assumption of uniformity across time. The absence of consensus alone suggests that the assumptions are too strong.

The present investigation offers evidence for a similar restriction on uniformity, across speakers and across related processes, at one point in time in the development of a language change.

2.1. Normative Patterns.

2.1.1. Verbs in CSR are stressed according to one of three basic patterns in the past tense: fixed stem stress, fixed end stress, or mobile stress (Fedjanina 1982:186-90; Levin 1978:82-100; Zaliznjak 1977:80-82). The accentual changes under investigation here, and currently in progress, occur in the mobile pattern. This pattern is defined by end stress (on the gender/number marker) in the feminine form together with stress elsewhere (either prefix or root) in the masculine, neuter and plural forms. We may refer to this pattern as *traditional mobility*. The pattern is unproductive; the stems belonging to this accentual class number about 29. Arranged according to morphological type, they are:

²These examples come from the thorough survey of the history of scholarship on this question given in Dingley (1983).

<i>a</i> -suffixed:	<i>brat'</i> 'take'; <i>vrat'</i> 'lie'; <i>gnat'</i> 'drive'; <i>drat'</i> 'rip'; <i>ždat'</i> 'wait'; <i>žrat'</i> 'devour'; <i>zvat'</i> 'call'; <i>lgat'</i> 'lie'; <i>rval'</i> 'tear'; <i>spat'</i> 'sleep'; <i>tkat'</i> 'weave'; <i>srat'</i> 'shit'
Unsuffixed <i>j</i> & <i>ν</i> -stems:	<i>vit'</i> 'weave'; <i>gnit'</i> 'rot'; <i>lit'</i> 'pour'; <i>pit'</i> 'drink'; <i>žit'</i> 'live'; <i>plyt'</i> 'swim'; <i>slyt'</i> 'pass for'
<i>r</i> -stems:	<i>meret'</i> 'die'; <i>peret'</i> 'push'
Nasal stems:	<i>vzjat'</i> 'take'; <i>kljast'</i> 'swear'; <i>-njat'</i> 'take'; <i>-čat'</i> 'begin'
Isolated types:	<i>byt'</i> 'be'; <i>dat'</i> 'give'; <i>prjast'</i> 'spin'; <i>rodit'</i> 'give birth'

2.1.2. An important correlate to traditional mobility is that for the reflexives of the verbs in this class stress prescriptively falls on all gender/number markers.³ In effect, the reflexives of mobile pattern verbs follow fixed end stress. Figure 1 lists, from the *dat'* nest, the forms of *podat'* 'serve; give; present' and *podat'sja* 'move (intr.); give way' as sample paradigms.

	<i>podat'</i> 'serve; present'	<i>podat'sja</i> 'move (intr.); give way'
Masc	<i>pódal</i>	<i>podálsja</i>
Neut	<i>pódalo</i>	<i>podalós'</i>
Pl	<i>pódali</i>	<i>podallís'</i>
Fem	<i>podalá</i>	<i>podalás'</i>

Fig. 1

2.2. Innovations. The verbs in this class are currently subject to two stress shifts which are of immediate interest. First, retraction off some or all gender/number markers may occur, both in the reflexives and in the non-reflexives. Second, advancement of stress to the gender/number marker may occur in the non-reflexive neuter form (only).⁴ One observes, additionally, a tendency toward stress alignment between non-reflexives and reflexives, so that these shifts serve as the mechanisms which, in appropriate combination, may yield one of three possible patterns. Using for hypothetical examples *sobrat'* 'gather, collect' and *sobrat'sja* 'gather (intr.); intend (to)', from the *brat'* / *brat'sja* nests of the *a*-suffixed stems, the combinations and patterns are as follows.

- (1) Retraction of stress in reflexive neuter and plural forms, leaving end stress only in the feminine, yields traditional mobility for both non-reflexives and reflexives:

³Bulaxovskij (1948:36) first formulated this correspondence for CSR. Fedjanina (1982:189) and Zaliznjak (1977:80) incorporate this correspondence into their descriptions of CSR stress; see also Levin 1986.

⁴The verbs of this accentual class for which non-feminine stress prescriptively falls on prefixes are subject to a third shift, advancement off of the prefix. This shift appears to operate independently of the other two, and it does not affect the fundamental historical characteristic of mobility, viz. the opposition of feminine stress to non-feminine stress. See esp. Voroncova 1979:168-86 for the development of the loss of prefix stress, from the 18th c. to the mid 20th c.

Implementation of Traditional Mobility

Masc	<i>sobrál</i>		<i>sobrálsja</i>
Neut	<i>sobrálo</i>	(<i>sobralós'</i> >)	<i>sobrálos'</i>
Pl	<i>sobráli</i>	(<i>sobralís'</i> >)	<i>sobrálís'</i>
Fem	<i>sobralá</i>		<i>sobralás'</i>

- (2) Retraction of all three end stresses in reflexives together with retraction of non-reflexive feminine end stress yields fixed stem stress for both non-reflexives and reflexives:

Implementation of Fixed Stem Stress

Masc	<i>sobrál</i>		<i>sobrálsja</i>
Neut	<i>sobrálo</i>	(<i>sobralós'</i> >)	<i>sobrálos'</i>
Pl	<i>sobráli</i>	(<i>sobralís'</i> >)	<i>sobrálís'</i>
Fem	(<i>sobralá</i> >) <i>sobralá</i>	(<i>sobralás'</i> >)	<i>sobralás'</i>

- (3) Retraction of stress just in the reflexive plural form, together with advancement to the gender/number marker in the non-reflexive neuter yields a restructured mobile pattern we may call *neomobile*, defined by end stress in both feminine and neuter forms coupled with non-end stress in masculine and plural forms:⁵

Implementation of Neomobility

Masc		<i>sobrál</i>	<i>sobrálsja</i>
Neut	(<i>sobrálo</i> >)	<i>sobraló</i>	<i>sobralós'</i>
Pl		<i>sobráli</i>	(<i>sobralís'</i> >)
Fem		<i>sobralá</i>	<i>sobralás'</i>

3. The field recordings of stress placements collected from the various native Russian speakers constitute partial individual speaker profiles, limited to their treatment of the accentuation of the target verb classes.⁶ Examination of those data suggests various parameters which may contribute to governing the stress retractions or advancements

⁵Borunova 1983, Fedjanina 1982, and Zaliznjak 1977 note neuter advancement for just *vzjat'* and *dat'* (simplex only). Nen'ko 1984 notes instances for other verbs of the accentual class in contemporary poetry. It does not appear to have been recognized in published works as a regular phenomenon. While retraction in reflexives is noted in most of the published sources mentioned here, it appears to have been universally assumed heretofore that the plural and the neuter are treated identically.

⁶The data for this study were gathered using a questionnaire consisting of paragraph-length passages of contemporary Russian prose, both fiction and non-fiction, each passage containing one or more of the target past tense forms. It was deemed crucial to avoid conscious judgments of stress placements by the participants. To that end, a participant's working copy contained no markings of any kind to draw attention to the target verbs, but had, instead, various syntactic choices built in, as tasks on which he or she might focus attention. Stress placements in the actual target forms were noted down while the participant read each passage and discussed the overt problems presented. No participant (all educated adult native speakers of Russian) ever indicated any recognition that stress placement was of interest or the actual focus of investigation.

which yield, ultimately, fixed stem stress or neomobility. The peculiar treatment of the *dat'* and *dat'sja* nests being the particular focus of this paper, we shall look here just at hierarchization of stem types or individual nests for propensity to undergo given shifts.

While the available data strongly suggest that each speaker exhibits a teleological motivation—he or she tends toward either fixed stem stress or neomobility for virtually the entire class—we shall look at the data from the standpoint of mechanism, viz. retraction or advancement.

Although the treatment given the *dat'* and *dat'sja* nests is the primary focus here, it naturally stands out most clearly against the treatment given other stem types in the class. Accordingly, we shall present selected and representative data from the *a*-suffixed and *j/ν*-stems for that purpose.

3.1. Retractions.

3.1.1 Table 1 below presents speaker D's stress placements for the *dat'* and *dat'sja* nests, and selected data from other stem types. Overall, this speaker exhibits an orientation toward fixed stem stress for the verb class in question. Accordingly, the crucial mechanisms are retraction of final stress in the non-reflexive feminine and retraction of final stress in all forms of reflexives. In practice, we focus on just the feminine reflexive: the historical stability of traditional mobility in non-reflexives and this speaker's apparent retention of it for certain stem types suggests retraction will be less likely or occur later in the feminine reflexive, so that it may be used as the decisive indicator of implementation of fixed stem stress in reflexives.

From the *dat'* nest there were no instances (0%) of feminine retraction among the 7 feminine forms recorded, making this nest the most conservative in the sample. The *j/ν*-stems were treated nearly as conservatively: 7%/31% feminine retraction. One instance of variable ending/root stress occurs among the 15 feminine *j*-stem forms recorded, and 5 instances occur among the 16 *ν*-stems (predominantly from the *plyt'* nest). The *a*-suffixed type marks the opposite extreme: 36 instances of consistent or variable feminine stem stress (66%) occur among the 47 feminine forms recorded.

From the reflexive *dat'sja* nest, only 1 instance (11%) of variable ending/stem stress occurs among the 9 feminine forms recorded. The *j/ν*-stems are also treated extremely conservatively: no instances (0%) of retraction occur among the 13 feminine forms recorded. The *a*-suffixed type again marks the opposite extreme: 22 of the 28 feminine forms recorded (79%) occur with consistent or variable retracted stress.

3.1.2. Table 2 below presents speaker L's stress placements for the *dat'* and *dat'sja* nests, and selected data from other stem types. This speaker, unlike speaker D, exhibits an overall orientation toward neomobile stress for the entire verb class, in view of which the plural of reflexives is virtually the only form in which retraction off of gender/number markers is manifested.

From the *dat'sja* nest there are 2 instances of retracted stress among the 7 plural forms recorded (29%), placing it at the conservative end for this speaker. For comparison, the *j/ν*-stems are treated nearly as conservatively: 6 instances of retracted stress (3 consistent, 3 variable) occur among the 19 plural reflexive forms recorded (32%). The *a*-suffixed stems mark the opposite extreme: 25 of the 33 plural forms recorded show retracted stress (76%).

3.1.3. Table 3 below presents speaker N's stress placements for the *dat'* and *dat'sja* nests, as well as selected data from other stem types. Like speaker L, this speaker exhibits an overall orientation toward neomobile stress, so that the only retraction of interest (or in evidence) is in the plural of reflexives.

From the *dat'sja* nest there are no instances (0%) of stress retracted off the gender/number marker among the 8 plural forms recorded. The *j/v*-stems are treated nearly as conservatively: 1 instance of variable ending/stem stress occurs among the 20 plural forms recorded (5%). This speaker treats reflexives conservatively overall, so compared to speaker L there is little retraction evident. Still, the *a*-suffixed stems again exhibit the greatest propensity to undergo retraction: 6 instances of stem or variable stem/ending stress occur among the 34 plural forms recorded (18%).

3.1.4. With regard to the mechanism of retraction from gender/number markers in implementing the given possible innovative stress patterns, *dat'* and *dat'sja* rank, for all speakers profiled, at the conservative end, relative to other stem types, on an axis of propensity to manifest retraction. The consistent treatment given to *j/v*-stems (conservative) and *a*-suffixed stems (radical) across speakers serves as background to better judge the treatment of *dat'* and *dat'sja*.

3.2. Advancement.

3.2.1. As noted above, speaker L exhibits an overall orientation toward neomobile stress for the entire verb class in question. Part of the evidence suggesting this tendency is the absence of retraction from the feminine gender/number marker in non-reflexives, but with, instead, implementation of stress advanced to the neuter gender/number marker.

Table 2 below presents the stress placements recorded for speaker L for the *dat'* nest. Stress advanced to the gender/number marker occurs for all 4 of the neuter forms recorded (100%). While the one recorded instance of feminine retraction (*sózdala*) indicates that neuter advancement for the entire nest must fall short of the sample's 100%, comparison with other stem types strongly suggests that for this speaker the *dat'* nest ranks toward the radical end on an axis of propensity to advance stress in the neuter form. Among the 11 instances of neuter forms recorded from the *a*-suffixed stems, 9 occur with end stress (82%). The remaining 2 exhibit variable ending/stem stress, so that one might reckon the extent of departure from traditional mobility near 100%. The *j/v*-stems rank toward the opposite end: 1 of the 4 neuter forms recorded from the *j*-stems (25%) occurs with neuter end stress, while 3 of the 8 neuter forms recorded from the *v*-stems occur with neuter end stress or variable ending/stem stress (37%). As for the *a*-suffixed stems, isolated instances of feminine retraction among recorded *j/v*-stems indicate that the extent of neuter advancement for these stem types generally must be less than the directly observed 25%/37%. In any event, the speaker clearly treats them conservatively compared to the other stem types.

3.2.2. Speaker N, like speaker L, exhibits an orientation toward neomobility for the verb class in question. Table 3 below shows that for speaker N all 4 instances of neuter forms recorded from the *dat'* nest occur with stress advanced to the end (100%). Moreover, there are no instances of retracted feminine stress recorded from this speaker for the nest, so that the extent of implementation of neuter advancement throughout the nest may indeed approach 100%.

Speaker N treats the *a*-suffixed stems nearly as radically as *dat'*: 10 of the 11 recorded neuter forms (91%) occur with end stress (1 of which does so in variation with

stem stress). As for the *dat'* nest, there are no recorded instances of feminine retraction, which would indicate the extent of neuter advancement might be significantly less than the sample's 91%. The *j/v*-stems also manifest considerable neuter advancement: 3 of the 4 *j*-stems neuter forms recorded and 8 of the 10 recorded *v*-stems occur with neuter end stress (79% overall).

Comparison of speaker N's treatment of the three stem types suggests two points. Broadly, all three rank toward the radical end of an axis of propensity to undergo neuter advancement. Compare, for example, the noticeably broader range spanned in speaker L's treatment. At the same time, more narrowly, there is some perceptible relative differentiation among the nests. The *j/v*-stems appear to be treated more conservatively than the *a*-suffixed stems; the *dat'* nest ranks with the more radical *a*-suffixed stems, even out-ranking them.

3.2.3. With regard to the mechanism of stress advancement to the neuter gender/number marker in non-reflexives, thereby implementing the neomobile pattern, both speakers manifesting this phenomenon rank *dat'* as most radical among stem types. The comparison types, *j/v*-stems and *a*-suffixed stems, are likewise treated consistently across speakers, the former relatively conservative, the latter relatively radical.

4. The rankings for these three speakers of the stem types under discussion for undergoing retraction from or advancement to gender/number markers are given graphically below, Fig. 2.

Both feminine retraction and reflexive plural retraction together with non-reflexive neuter advancement constitute innovation away from the historical patterns (and contemporary prescriptive norms) for these verbs. From the point of view, then, of innovation away from traditional norms, there is some expectation that relative hierarchization of stem types for propensity to undergo the given shifts would be consistent across speakers and across mechanisms. This assumption is borne out in the treatment of the *j/v*-stems and the *a*-suffixed stems: the discussion above and the scales sketched reveal that across all speakers the *j/v*-stems are consistently less likely to undergo a given shift, while the *a*-suffixed stems are (among) the most likely.

The *dat'* and *dat'sja* nests, however, are not treated according to a consistent hierarchy of stem types. In undergoing the retractions yielding fixed stem stress, both *dat'* and *dat'sja* rank among the most conservative. In undergoing the reflexive plural retraction yielding neomobile stress, *dat'sja* likewise ranks as the most conservative. In undergoing non-reflexive neuter advancement yielding neomobile stress, however, *dat'* ranks as the most radical.

These inconsistencies demonstrate that the items in the domain of a given change may not all participate in a given implementation hierarchy, or, correlatively, that a uniform set of implementation factors may not apply across the change's domain, even for teleologically related aspects of the same change. In this instance, the *j/v*-stems and *a*-suffixed stems are relatively equally insensitive to differences in mechanism of innovation. They appear instead to depart from their traditional, normative patterns according to a consistent hierarchy of stem types: both are treated relatively conservatively resp. radically across speakers and across possible innovative patterns in departing from traditional norms. *Dat'* and *dat'sja*, on the other hand, are highly sensitive to the mechanism of innovation, being treated conservatively for any innovation requiring retraction from gender/number markers, but radically for innovation requiring

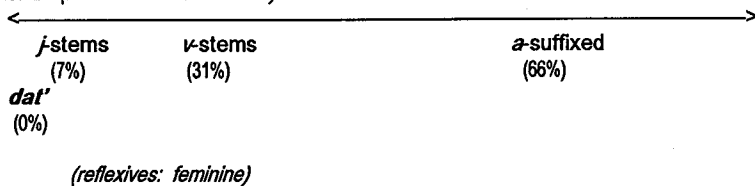
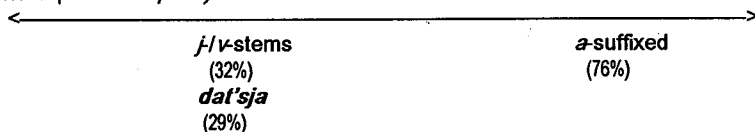
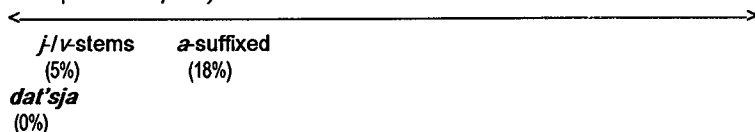
RetractionsSpeaker D (*non-reflexives: feminine*)*(reflexives: feminine)*Speaker L (*reflexives: plural*)Speaker N (*reflexives: plural*)**Advancement**Speaker L (*non-reflexives: neuter*)Speaker N (*non-reflexives: neuter*)

Fig. 2

advancement to gender/number markers. From the point of view of place of stress, it appears that, within restrictions imposed by other aspects of the CSR accentual system, speakers tend to favor end stress for *dat'/dat'sja*. Note that in the non-past *dat'*, although irregular in its inflectional forms, is an obstruent stem with end stress: *dam, daš', dast, dadím, dadíte, dadút*.⁷

The change (broadly understood) assumed to be in progress--the restructuring of the accentuation of the specified verb types--is a complex one: related, but logically distinct mechanisms are required to implement it. Focusing attention here on *dat'/dat'sja* reveals that a hierarchization of stem types for propensity to manifest the change does not map consistently from one aspect of the change to another. The treatment of *dat'/dat'sja*, then, furnishes a correlate in language change processes to the restrictions on correspondences Bazell has argued for in synchronic linguistic analyses.

⁷The accentual class under investigation includes only one other non-past end-stressed obstruent stem, *prjast'*, a regular first conjugation verb. No instances of past tense forms from the nest occurred in the field samples.

TABLE 1: Speaker D

<i>dat'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'</i>			R	E
<i>zadat'</i>	P		P	E
<i>obdat'</i>	R	R		
<i>otdat'</i>	P	P	P	E
<i>peredat'</i>	R	R	P	E
<i>podat'</i>	P		P	E
<i>predat'</i>	P		P	
<i>pridat'</i>	R			
<i>prodat'</i>	R		P	
<i>razdat'</i>			R	
<i>sdat'</i>			R	E
<i>sozdat'</i>			P	E

<i>dat'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'sja</i>			E	E
<i>zadat'sja</i>				E
<i>otdat'sja</i>				E
<i>peredat'sja</i>		E		E
<i>podat'sja</i>			R	E
<i>poddat'sja</i>	E	E	R	E
<i>predat'sja</i>				E
<i>razdat'sja</i>	R	R	R	E
<i>sdat'sja</i>		R	R	
<i>sozdat'sja</i>		R		E-R
<i>udat'sja</i>		E		

A-Suffixed

<i>rval'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>rval'</i>				
<i>narval'</i>				E
<i>oborval'</i>				R
<i>otorval'</i>		R		R
<i>podorval'</i>		R		R
<i>prerval'</i>				R
<i>razorval'</i>	R			R
<i>sorval'</i>	R	R	R	E

<i>rval'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>rval'sja</i>		R	R	E
<i>vorval'sja</i>		R	R	R
<i>vzorval'sja</i>		R	R	R
<i>dorval'sja</i>			R	
<i>nadorval'sja</i>			R	R
<i>oborval'sja</i>		R	R	R
<i>otorval'sja</i>	R	R	R	R
<i>porval'sja</i>		R		R
<i>prerval'sja</i>		R	R	R
<i>prorval'sja</i>		R	R	R
<i>razorval'sja</i>		R	R	R
<i>sorval'sja</i>		R	R	R

J-/V-Stems

<i>lit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'</i>				
<i>zalit'</i>	P	P	P	E
<i>nalit'</i>	R		R	E
<i>oblit'</i>			R	
<i>otlit'</i>				E
<i>perelit'</i>	R			E
<i>polit'</i>	R		R	E
<i>prilit'</i>				E
<i>prolit'</i>			R	
<i>razlit'</i>	R			E-R
<i>slit'</i>				E

<i>žit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'</i>		R-E	R	E
<i>dožit'</i>	P-R	R	R	E
<i>zažit'</i>			R	E
<i>izžit'</i>	R			E
<i>ožit'</i>	R	P	P-R	E
<i>obžit'</i>	P-R			
<i>otžit'</i>				E
<i>perežit'</i>	R		R	R
<i>požit'</i>	R		R	
<i>podžit'</i>			R	E
<i>prožit'</i>	P-R		P	E

<i>lit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'sja</i>	R	E	E	E
<i>vlit'sja</i>		R	R	E
<i>zalit'sja</i>		P	E	
<i>nalit'sja</i>		E	E-R	E
<i>polit'sja</i>		E	E	
<i>prolit'sja</i>		R		E
<i>razlit'sja</i>		E	R	E
<i>slit'sja</i>		E	E	

<i>žit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'sja</i>		E		
<i>vžit'sja</i>			R	E
<i>izžit'sja</i>			R	
<i>obžit'sja</i>			R	
<i>prižit'sja</i>			E	E

TABLE 2: Speaker L

<i>dat'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'</i>			R	E
<i>zadat'</i>	P		P-R	E
<i>obdat'</i>	R	E		
<i>otdat'</i>	P	E	P	E
<i>peredat'</i>	R	E	R	E
<i>podat'</i>	P		P	E
<i>predat'</i>	P		P	
<i>pridat'</i>	R			
<i>prodat'</i>	P		P	
<i>razdat'</i>			R	
<i>sdat'</i>		E		E
<i>sozdat'</i>	P		P-R	P

<i>dat'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'sja</i>			E	E
<i>zadat'sja</i>				E
<i>otdat'sja</i>				E
<i>peredat'sja</i>		E	E	E
<i>podat'sja</i>			P	E
<i>poddat'sja</i>	R	E	E	E
<i>predat'sja</i>				E
<i>razdat'sja</i>	R	E	R	E
<i>sdat'sja</i>		E	E	
<i>sozdat'sja</i>		E	E	E
<i>udat'sja</i>		E		

A-Suffixed

<i>rval'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>rval'</i>				E
<i>oborval'</i>				E
<i>otorval'</i>	R	E		E
<i>podorval'</i>		E		E
<i>prervat'</i>	R			E
<i>razorval'</i>	R			E
<i>sorval'</i>	R	E	R	E

<i>rval'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>rval'sja</i>		E	E	E
<i>vorval'sja</i>		E	R	E
<i>vzorval'sja</i>		E	R	E
<i>dorval'sja</i>			R	
<i>nadorval'sja</i>			R	E
<i>oborval'sja</i>		E	E-R	E
<i>otorval'sja</i>	R	E	E-R	E
<i>porval'sja</i>		E	R	E
<i>prervat'sja</i>		E	E	E
<i>prorval'sja</i>	R	E	R(-E)	E
<i>razorval'sja</i>		E	R	E
<i>sorval'sja</i>		E	R	E

J-/V-Stems

<i>lit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'</i>				
<i>vlit'</i>				E
<i>zaliť</i>	R	E	R	E
<i>nalit'</i>	R		R	E-R
<i>oblit'</i>			R	
<i>otlit'</i>				E
<i>perelit'</i>	R			E
<i>polit'</i>	R		R	E
<i>prilit'</i>				E
<i>prolit'</i>			R	
<i>razlit'</i>	R			E
<i>slit'</i>		R		E

<i>žit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'</i>		R-E	R	E
<i>dožit'</i>	P	P		E
<i>zažit'</i>			R	E
<i>izžit'</i>	R			
<i>ožit'</i>	P-R	P	P	E
<i>obžit'</i>	P		R	
<i>otžit'</i>				E
<i>perežit'</i>	R		R	R
<i>požit'</i>	R		P	
<i>podžit'</i>			R	E
<i>prožit'</i>	P		P	E

<i>lit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'sja</i>	R	E	E	E
<i>vlit'sja</i>		E	E	E
<i>zaliť'sja</i>		E	E	
<i>nalit'sja</i>		E	E	E
<i>polit'sja</i>		E	E	
<i>prolit'sja</i>		E		E
<i>razlit'sja</i>		E	E-R	E
<i>slit'sja</i>		E	E	

<i>žit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'sja</i>		E		
<i>vžit'sja</i>		E		
<i>izžit'sja</i>			R	E
<i>obžit'sja</i>		E	E-R	
<i>prižit'sja</i>			E	E

TABLE 3: Speaker N

<i>dat'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'</i>			R	E
<i>zadat'</i>	P		P	E
<i>obdat'</i>	R	E		
<i>otdat'</i>	P-R	E	P	E
<i>peredat'</i>	R	E	R	E
<i>podat'</i>	P		P-R	E
<i>predat'</i>	P		P	
<i>pridat'</i>	R			
<i>prodat'</i>	P-R		P	
<i>razdat'</i>			R	
<i>sdat'</i>		E		E
<i>sozdat'</i>	P		P-R	E

<i>dat'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>dat'sja</i>			E	E
<i>zadat'sja</i>				E
<i>otdat'sja</i>				E
<i>peredat'sja</i>		E	E	E
<i>podat'sja</i>			E	E
<i>poddat'sja</i>	R	E	E	E
<i>predat'sja</i>			E	E
<i>razdat'sja</i>	R	E	E	E
<i>sdat'sja</i>		E	E	
<i>sozdat'sja</i>		E	E	E
<i>udat'sja</i>		E		

A-Suffixed

<i>gnat'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>gnat'</i>		E	R	E
<i>dognat'</i>	R		R	E
<i>zagnat'</i>		E	R	E
<i>nagnat'</i>		R		E
<i>obognat'</i>	R			E
<i>otognat'</i>				E
<i>pognat'</i>	R			E
<i>prognat'</i>			R	E
<i>ugnat'</i>			R	

<i>ždat'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>ždat'</i>		E	R	E
<i>pereždat'</i>	R			E?
<i>proždat'</i>				E

<i>gnat'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>gnat'sja</i>		E	E	E
<i>pognat'sja</i>			E	
<i>razognat'sja</i>			R	

<i>ždat'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>doždat'sja</i>	R	E	R	E
<i>zaždat'sja</i>		E	E-R	E

/–/V-Stems

<i>lit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'</i>				E
<i>vlit'</i>				
<i>zaliť</i>	P-R	E	P	E
<i>naliť</i>	P-R		P	E
<i>oblit'</i>			R	
<i>otlit'</i>				E
<i>pereliť</i>	R			E
<i>poliť</i>	R		R	E
<i>priliť</i>				E
<i>proliť</i>			R	
<i>raziť</i>	R			E
<i>slit'</i>		E		E

<i>žit'</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'</i>		R-E	R	E
<i>dožit'</i>	R	E		E
<i>zažit'</i>			P	E
<i>izžit'</i>				E
<i>ožit'</i>	P	P	P	E
<i>obžit'</i>	R			
<i>otžit'</i>				E
<i>perežit'</i>	R		R	E
<i>požit'</i>	R		R	
<i>podžit'</i>			R	E
<i>prožit'</i>	P-R		R	E

<i>lit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>lit'sja</i>	R	E	E	E
<i>vlit'sja</i>		E	E	E
<i>zaliť'sja</i>		E	E	
<i>naliť'sja</i>		E	E	E
<i>poliť'sja</i>		E	E	
<i>proliť'sja</i>		E	E	E
<i>raziť'sja</i>		E	E	E
<i>slit'sja</i>			E	

<i>žit'sja</i>	<i>Masc</i>	<i>Neut</i>	<i>Plur</i>	<i>Fem</i>
<i>žit'sja</i>		E		
<i>vžit'sja</i>		E	E	E
<i>izžit'sja</i>			E	
<i>obžit'sja</i>		E	E	
<i>prižit'sja</i>			E	E

REFERENCES

- Avanesov, R. I., and S. I. Ožegov, eds. 1960. *Russkoe literaturnoe proiznošenie i udarenie; slovar'-spravočnik*. Moscow: Gos. izd-vo inostrannyx i nacional'nyx slovarej.
- Bazell, C. E. 1966. "The correspondence fallacy in structural linguistics," reprinted in: Eric P. Hamp, Fred W. Householder, and Robert Austerlitz, eds., *Readings in Linguistics II*. Chicago: The University of Chicago Press, pp.271-298.
- Borunova, S. N., V. L. Voroncova, and N. A. Es'kova. 1983. *Orfoèpičeskij slovar' russkogo jazyka: proiznošenie, udarenie, grammatičeskie formy*. R. I. Avanesov, ed. Moscow: Russkij jazyk.
- Bulaxovskij, L. A. 1948. "Sravnitel'no-istoričeskie zametki k udareniju russkogo glagola; vozvratnye glagoly," *Doklady i soobščeniya In-ta rus. jazyka AN SSSR* 1:18-48.
- Dingley, J. 1983. *The peripheral Plural Endings of Nouns in Petrine Sermons*. München: Verlag Otto Sagner.
- Fedjanina, N. A. 1982. *Udarenie v sovremenom russkom jazyke*. Moscow: Russkij jazyk.
- Levin, M. 1978. *Russian Declension and Conjugation*. Columbus, OH: Slavica.
- 1986. "Past Tense Stress and the Particle -SJA," *Russian Language Journal* XL (No.135).
- Nen'ko, V. M. 1984. "O kolebanijax udarenija v glagolax sovremennogo russkogo jazyka," *Filologičeskie nauki* 4 (142):56-62.
- Stang, C. S. 1952. *La langue du livre 'Učenie i xitrost' ratnogo stroenija pexotnyx ljudej 1647': Une monographie linguistique*. Oslo.
- Strom, M. 1988. *Innovation in Past Tense Mobile Stress in Contemporary Standard Russian*. Unpublished Ph.D. dissertation, University of California, Los Angeles.
- Šaxmatov, A. A. 1910. *Kurs istorii russkogo jazyka*. Sankt-Peterburg.
- Unbegaun, B. O. 1935. *La langue russe au XV^e siècle (1500-1550) I: La flexion des noms*. Paris: Champion.
- Voroncova, V. L. 1979. *Russkoe literaturnoe udarenie XVIII-XX vv*. Moscow: Nauka.
- Zaliznjak, A. A. 1977. *Grammatičeskij slovar' russkogo jazyka*. Moscow: Russkij jazyk.

WINNERS OF POST-DOCTORAL COMMENDATIONS

"HIS AND HERS ARE ALL RIGHT, BUT I FEELS ITS IS A BIT ODD":
INANIMATE GENDER AND THE THIRD PERSON SINGULAR POSSESSIVE
PRONOUNS IN ENGLISH

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1. THE PROBLEM

An examination of the system of possessive third person singular pronouns, reveals a rather intriguing asymmetry. When the pronouns are used in a completive role (i.e. adjectivally), a complete series of forms is found, but when they are used suppletively (i.e. pronominally) the same does not hold true. While the animate forms, *his/his* and *her/hers*, pose no particular problems, playing either a completive or a suppletive role with equal facility, the inanimate suppletive, *its*, seems rather awkward, if not downright unacceptable in some cases. Consider, for example, the following series of sentences:

(1a) I like his coat.

(1b) I like her coat.

(1c) I like its colour. (The colour of a car or of a piece of material perhaps.)

(2a) I like his. (Referring to his coat.)

(2b) I like hers. (Referring to her coat.)

(2c) ??I like its. (Referring to its colour.)

Of the several general grammatical reference books consulted concerning the awkwardness of sentences like (2c), only one, that authored by Schibsbye (1969), offers an attested example of an inanimate suppletive form in use. The example reads as follows and will be examined in more detail after the problem posed by *its* has been further discussed:

(3) These nations will have attained their maximum development before the rest of the world has attained its.
(Evans, *A Dictionary of Contemporary American Usage*, as cited by Schibsbye:203).

In contrast, neither Scheurweghs (1959) nor Quirk et al. (1985) mention suppletive *its*, while Strang (1968), who states that it is indeed possible, offers no examples of attested usage. What is even more intriguing for the curious reader is that none of the grammarians consulted seemed to wonder why *its* should be excluded or

labelled as questionable. The authors of these general works seemed perfectly content to observe that the form is infrequent and awkward, but did not pursue the issue any further.

On the basis of the evidence outlined thus far, two questions come to the fore: Why should there be a basic incompatibility between the inanimate form of the possessive pronoun and the suppletive function? Why does this incompatibility not extend to the completive form as well?

In order to begin to answer these questions, it proves useful to add another dimension to the problem: the phonetic realisation of the possessive pronouns. When this step is taken, some interesting observations can be made. For instance, when a third person singular personal pronoun is used suppletively (as in 2a, b and c above), it is systematically stressed:

- (2a') /aɪ laɪk 'hɪz/
- (2b') /aɪ laɪk 'həʊz/
- (2c') ??/aɪ laɪk 'its/

Keeping this phonetic parameter in mind, it is now possible to re-examine examples (1a) to (1c), where stressing is not mandatory, asking ourselves what the consequences would be of putting stress on the possessive pronoun.

- (1a') /aɪ laɪk 'hɪz kɒt/
- (1b') /aɪ laɪk 'həʊ kɒt/
- (1c') ??/aɪ laɪk 'its kʌləʊ/

One can observe that the same type of restrictions and feeling of awkwardness found in the inanimate suppletive form reappear in the inanimate completive as soon as the pronoun is stressed. While (1a') and (1b') are perfectly acceptable, (1c') strikes me as being as questionable as (2c). Most anglophones would probably prefer to avoid stressed *its*, using instead a noun phrase with a stressed demonstrative such as *that one's colour* or *this one's colour*.

On the strength of these observations, it is now possible to reformulate the original questions posed above, thus bringing them more in line with the evidence. Rather than wondering why the inanimate pronoun should be incompatible with suppletive usage, we can simply ask why *its* cannot easily be stressed. This slight change in our way of looking at the problem proves to be very important because it not only make solving the enigma at hand somewhat easier, but also provides a connecting thread which ultimately allows us to link up to research into personal pronoun accentuation that has

shown that the inanimate form, *it*, is rarely stressed in discourse. (See Strang 1969, Quirk 1985, Morris 1991.)¹

2. Towards an Explanation

As Strang remarks, stressing a pronoun creates a situation where at least two different possibilities are compared. For example, the utterance *I like John.* (/aɪ laɪk dʒən/), with stress on *I*, suggests that while the speaker enjoys John's company, somebody else does not. Similarly, the sentence *We found 'his.* (/wi: faʊnd 'hɪz/) leads us to think that another object — *hers, mine, yours, ours* or *theirs* — was not found. In other words, a stressed pronoun designates a referent which is viewed in a contrast to second, comparable possibility.

As has already been observed, the animate third person singular pronouns lend themselves quite readily to this type of contrastive opposition—as shown by the perfect acceptability of the stressed animate forms above—, while the inanimate pronoun does not. There would thus seem to be a fundamental incompatibility between the grammatical meaning of the inanimate gender and its use in a comparative situation. The question that now needs to be answered is why.

The traditional definition of gender in English which links the category more or less directly to sex—a definition which has been recycled by grammarians for some three hundred years—proves to be of little value when it comes to answering this question. Declaring that a linguistic category is determined in whole or in part by extralinguistic parameters such as the sex of the referent or the affective attitude the speaker adopts with respect to it, does not lead us very far. It is important to keep in mind that the biological traits of a referent are not immediately present in language. Language is first and foremost a representation; not of the extralinguistic world, but of the speaker's mental image of this world. Furthermore, the sex of a referent, even when explicitly stated, does not necessarily correspond to the gender of the linguistic representation it is given. An animal or even a human being whose sex has already been established may be represented by a neuter pronoun, and an animate pronoun can serve to evoke a biologically inanimate referent (Morris 1991). Moreover, even if there were direct sex/gender correspondence (which is not the case), it would still be difficult to solve the problem

¹ It is indeed difficult to find situations in which *IT* is stressed. In researching my doctoral dissertation, I found only the following types of examples: *Is this word 'it?* (looking for a particular word); *Is that 'it?* ; *Coke is 'it!* ; *"That was 'it. That was really 'it.* She knew that she had told herself that was 'it only seconds earlier, but this was now the real ultimate 'it." (Adams, *Dirk Gently's Holistic Detectice Agency*, 8).

outlined above defining gender in terms of extralinguistic, biological traits since biology would seem to have little to do with the question at hand.

There is however an alternative definition of gender—linguistic in nature—which can account for what has been observed in the case of the inanimate pronoun. After examining some 1500 examples of "exceptional" usage which biological or affective explanations fail to account for (Morris 1991), it was proposed that the category of gender was an essential part of the linguistic representation a speaker give to his mental construal (or designatum) of his referent (or denotatum). The category of gender, assisted by the category of number, would seem to indicate the nature of the internal architecture (contained space) of this mental construal, providing a sort of blue print of how it is constructed. As there are three genders in English, this internal architecture can take three different forms, two similar animate structures, one masculine and one feminine, and one quite different inanimate structure, the neuter. For the purposes of this paper, discussion will be limited to the animate/inanimate opposition, the one most immediately implicated in the problem at hand and the easier to grasp.

Careful examination of the aforementioned 1500 "exceptional" examples revealed that animate gender is consistently found when it is possible to discern a duality or opposition of two comparable notions underlying the speaker's mental image of his referent. In short, when a speaker chooses an animate pronoun, it is not only to indicate that the referent has been perceived as being distinct from absolutely everything else—a condition which must be met if anything is to be perceived to exist—but also to characterize it further by defining it with respect to a comparable alternative version. Often a sexual opposition inspires this perceived duality (the female of the species is necessarily defined with respect to the male and vice versa), but the duality can be of a more artificial, ephemeral nature, being invented by the speaker rather than founded on a biological reality. Behind every feminine or masculine linguistic representation of a boat, a car, a bottle or even weather conditions, it is possible to detect an implicit comparison in which the speaker contrasts his immediate impressions of a referent with an alternative set of impressions based on his general experience and knowledge of the referent or type of referent in question. For example, a car which is given feminine pronominal representation has been construed as a particular experience which can be contrasted with a more general knowledge of cars or even of the particular car in question.

In contrast, when an inanimate representation results, there is no impression of underlying duality or comparative thought. *It* is used

when the speaker simply distinguishes the set of impressions received from the referent from all other possible impressions—the baseline condition for definition and representation to occur—but does not go on to contrast this set of impressions to another particular set of a comparable nature. For example, a car which is given neuter linguistic representation is simply viewed against a background of everything which is different (i.e. everything which is not that particular car), but not compared to another possible realisation of a similar nature (i.e. another set of impressions associated with cars in general or the particular car in question). In short, inanimate gender is used when the speaker can evoke the referent by simply recognizing its existence and does not need to characterize that existence any further.

Returning to the problem described at the beginning of this paper, it is now possible to understand the unacceptability of the inanimate pronoun in stressed uses. The role of inanimate gender is to provide a minimal definition of contained space, contrasting it with all containing space in general, but no space in particular, yet accentuation of a possessive pronoun creates a situation in which the designatum represented by the pronoun is implicitly or explicitly opposed to a second possibility or option of a comparable nature. The conclusion to be drawn is quite simple: if we do not generally find *its* where pronoun stressing occurs, it is because inanimate gender is a tool which is not suited for use in a contrastive situation. The animate pronouns, on the other hand, lend themselves perfectly to this type of usage since they are founded on contrast and comparison of comparable alternatives.

This may all seem very well, but let us not forget (3) above in which a stressed inanimate suppletive pronoun occurs in attested usage. In trying to understand how this can occur, it is important to note that (3) differs from the other examples examined thus far in several respects. In the use of the inanimate suppletive deemed questionable or unacceptable above, the form was isolated so that it stood on its own in a sentence. In (3) the suppletive use stands in opposition to the completive possessive in the phrase *their maximum development*. This juxtaposition has the effect of explicitly providing the lexical content—*maximum development*—intended to complete *its* and making it easy for the reader or listener to reconstruct a completive form mentally.

It is also interesting to note that the first part of the example contains the demonstrative *these*, a word which forms a binary system with *those*. *Those*, however, does not appear in the example. Instead, *the rest of the world* appears where *those nations* might be expected or implied. In this manner, a comparative situation is

indeed established, but it is not one in which two binarily opposed terms are contrasted. Perhaps the implied element, *those nations*, is intended to be synonymous with *the rest of the world*, but the way the passage is worded serves to break, rather than reinforce, the symmetry of the comparison. The result is sufficient fracturing of the equilibrium of the comparison to allow for use of an inanimate pronoun.

This interpretation is strengthened when one attempts to restore symmetry in the example and then observes the results. The grammaticality of following sentence, which includes two suppletive forms, is much more questionable than that of (3):

(4) ??These nations will have attained theirs before the rest of the world has attained its.

Similarly, when two singular demonstratives are used to strengthen the symmetry of the passage, the result is once again quite awkward:

(5) ??That nation will have obtained its maximum development before this one has attained its.

Although these tests are far from conclusive, they do suggest that the more balanced and symmetrical the comparison established, the lesser the chance of finding *its* in a suppletive role, findings which would in turn support what has been claimed thus far about the basic incompatibility existing between inanimate gender and an underlying comparison of comparable notions.

Whatever their validity, these remarks do not explain why the inanimate pronoun in (3) is stressed, a relatively rare occurrence. I think that the explanation here is relatively straight-forward. *Its* is stressed because it is used in a contrastive situation where stressing is mandatory. There is no reason why an inanimate pronoun cannot be stressed when the situation calls for it. However, given the grammatical meaning and role of the inanimate pronoun, a role which does not usually involve participation in a contrasting of comparable possibilities, it is rather uncommon to find it in a situation where stressing has to occur.

3. Conclusions

At first glance the minor glitches in the pronominal system which provided the starting point for this paper hardly appear to be a key element in the English gender puzzle. However, upon closer examination the problems posed by the inanimate possessive pronouns in stressed uses turn out to be quite significant indeed. Not only do they confirm that a "biological" approach to the gender

question is destined to fail, but they provide evidence which supports an alternative approach to gender, one which examines the category in terms of its role in the representational process.

Bibliography

- Morris, L. (1991). *Gender in Modern English: The System and Its Uses*. Doctoral Thesis, Université Laval.
- Quirk, R. et al. (1985). *A Comprehensive Grammar of the English Language*. London and New York, Longman.
- Scheurweghs, G. (1959). *Present-Day English Syntax*. London, Longman and Green Co. Ltd.
- Strang, B. (1968). *Modern English Structure*. London: Edward Arnold Ltd.
- Schibsbye, K. (1969). *A Modern English Grammar*. London, Oxford University Press.

PERCEPTION VS. COGNITION
AS MANIFESTED IN JAPANESE SYNTAX*

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0. Introduction.

As has been implicitly noted in the linguistic literature, pairs of linguistic forms seem to suggest two types of linguistic coding. One type takes the single step of simply encoding perceived stimuli into linguistic representation (henceforth referred to as simple linguistic encoding). The other type adds the additional step of working on the acquired information and 'conceptualizing' it as a removed abstract proposition (henceforth referred to as deliberative linguistic encoding).

This paper first aims to present examples of such pairs from Japanese syntax. It then argues that such a phenomenon is not an idiosyncrasy of Japanese syntax but could be seen also in other languages, especially in the area of evidentiality coding. Furthermore, this paper also explores the possible relevance of such linguistic coding to philosophical inquiries.

In an attempt to unify these findings, this paper suggests the possibility that such a dichotomy of linguistic codings could be considered as a reflection of the cognitive psychological dichotomy of perception vs. cognition.

I. Japanese Syntax and Two Types of Linguistic Coding.

I.1. Complementizers, no and koto

Japanese has two complementizers, no and koto. They show different distributions as to which main verbs and embedded propositions they cooccur with. Kuno (1973) claims that the difference between no and koto is that no encodes concrete events perceivable by our senses, whereas koto encodes abstract concepts as seen in his examples below.

- I believe what is operative in the complementizer choice in Japanese is the difference in encoding mechanisms. That is, no reflects a simple linguistic coding mechanism in which perceived stimuli are being encoded into linguistic representation instantly. In contrast, koto reflects a mechanism of further 'conceptualizing' the information acquired from various sources over some time as an abstract proposition.

1.2. Simple Tense vs. Progressive Tense.

Chafe (1973:276) claims that when a sportscaster uses the present tense in the reporting of a ball game such as 'O'Malley throws to first,' it looks as if 'it [the image] were entering his eyes and passing out through his mouth simultaneously.' This section concerns how temporality interacts with the linguistic codings under discussion.

It is well-known that Japanese verbals of inner world expressions are sensitive to an epistemological constraint: no one has access to another's inner world. Thus, the verb of mentality, omou, normally does not allow the second and third person subjects as in example (4). However, if a progressive verbal form is taken, this restriction diminishes, as in sentence (5).

- (4) (Watashi/*Anata/*Taro) wa Hanako ga kirei da
 I You TOP SUB pretty copula
 to omou.
 COMP think
 '(I/You/Taro) think(s) Hanako is pretty.'

- (5) (Watashi/Anata/Taro) wa Hanako ga kirei da
 I You TOP SUB pretty copula
 to omotte-iru.
 COMP think-ing
 '(I/You/Taro) think(s) Hanako is pretty.'

Nakau (1979) claims that omou refers to an instantaneous thinking process, whereas omotte iru refers to a durative thinking process. Nakau argues that omou is not compatible with subjects other than the speaker himself because the speaker is liable only for his own mental state and there is no way of instantaneously knowing what mental state others are in. In contrast, omotte iru is compatible with other subjects because the speaker may be able to refer to another party's mental state given some duration of time for observation and inference. His dichotomy of instantaneous vs. durative thinking processes is reminiscent of our dichotomy of simple and deliberative linguistic codings.

In this connection, what is of interest is Josephs' (1976:346) observation on the interaction of the complementizers and aspect. Josephs notes that factive verbs designating an emotional response (e.g. surprise, shock, fright, annoyance, embarrassment) in the simple

past tense only cooccur with the complementizer *no* as seen in sentence (6).

- (6) Kare ga anmari teinei ni hanashita { *no* } ni wa
 he SUB too politely spoke { **koto* }
 heikoo *shi-ta*.
 was at a loss
 'I was at a loss because he spoke so politely'

However, *koto* becomes acceptable if the progressive verb form is taken as in (7):

- (7) Kare ga anmari teinei ni hanashita (*no/koto*) ni
 wa heikoo *shite-iru*.
 'I'm (still) annoyed that he spoke so politely.'

Josephs states that the simple past tense form designates 'a quick relatively instantaneous response', while the progressive form designates 'a continuing emotional state that is not instantaneous and is separated from the stimulus event by a considerable duration of time.' His account is consistent with the present proposal of two linguistic coding processes.

Closely related to Josephs' analysis of the difference between the simple past and the present progressive is Inoue's (1978) study of the *-te iru* form. Verbs of sensation are non-stative verbs in Japanese and have to be stativized with the progressive suffix *-iru* in order to refer to a present state. Yet, the progressive form is not the choice when the strong endorsement of the speaker is involved as in the exclamatory sentence (8).

- (8) Aa, (tsukare-*ta*!/*tsukarete-*iru*!)
 oh fatigue-past fatigue-progressive
 'Oh, am I tired!'

As she (1978:109) further observes, however, 'if the speaker is not involved, and he wants to simply state his condition as a reason for a request,' then the progressive form is an appropriate choice as below:

- (9) Kyoo-wa tsukare-te i-ru node,
 today fatigue-Gerund be-Nonpast since
 hayaku kaer-u.
 early return-Nonpast
 'Since I am tired today, I will leave early.'

From the point of view of the linguistic coding at issue, sentence (8) indicates a situation in which the speaker is encoding his sensation instantly, whereas

sentence (9) reflects a context where he presents his sensational state as a distanced and conceptualized proposition.

What this all leads to is the correlation between simple tense and a simple linguistic coding mechanism on one hand and progressive aspect and a deliberative linguistic coding mechanism on the other.

I.3. Phenomenological vs. Judgement Sentences.

Japanese traditional grammar has long recognized two basic sentence types: phenomenological and judgement sentences (See Yamada 1936 and Mio 1948). According to Mio, a phenomenological sentence is one in which the speaker directly transforms what he perceives through his senses into a linguistic expression. In contrast, a judgement sentence is the product which follows from the speaker's judgement that a given linguistic expression does indeed represent the true situation. Mio's sentences (10) and (11) represent phenomenological and judgement sentences respectively:

(10) Ame ga futte-iru.
rain SUB fall
'It is raining.'

(11) Shiru koto wa aisuru koto de arimasu.
know to TOP love to is
'To know is to love.'

A similar contrast was pointed out by Kusanagi (1976)³. He notes that sentence (12) without n(o) da has a heuristic tone uttered by the speaker who has just realized the high commodity prices in Tokyo, while sentence (13) with n(o) da suggests that the speaker came to such a conclusion after some deliberation. That is, sentences (12) and (13) correspond to phenomenological and judgement sentences respectively.

(12) Tokyo wa bukka ga takai!
topic commodity prices subject high
'Aren't commodity prices high in Tokyo!'

(13) Tokyo wa bukka ga takai n da.
'It is that commodity prices are high in Tokyo.'

Yet another parallel is seen in sentences (14) and (15):

- (14) (Watashi/*Taro) wa sashimi ga tabe-tai!
 I TOP SUBJ eat-want
 'I / Taro want(s) to eat sashimi!'

- (15) (Watashi/ Taro) wa sashimi ga suki da.
 like
 'I /Taro like(s) sashimi.'

Sentence (14) is the speaker's report on his immediate sensation or desire. Sentence (15), on the other hand, is a report on the judgement of the speaker's or other person's preferences. As Kusanagi explains, the adjectival nominal suki da embraces some duration of time, referring to a semi-permanent state, and that this duration of time allows the speaker to acquire some basis to judge other people's inner-world phenomena.

The present study asserts that both sentence types are reflections of simple and deliberative codings discussed thus far.

II. Evidentials in the World

Akatsuka (1979) distinguishes two types of knowledge: one in the subjective domain and the other in the objective domain. The former is one 'acquired through Ego's direct experience', whereas the latter is one 'acquired through pure logical reasoning or via somebody else's knowledge' (See also Chafe 1973:265).

This distinction between directly acquired knowledge (i.e., subjective domain) and indirectly acquired knowledge (i.e., objective domain) is widely seen in the evidentiality systems of the world. For instance, in Turkish, past direct experience is marked by the suffix -di and indirect experience by -mis as below⁴:

- (16) gel -di.
 come past of direct experience
 'He/She/It came.'

- (17) Kemal gel-mis.
 past of indirect experience

(a) inference: The speaker sees Kemal's coat hanging in the front hall, but has not yet seen Kemal.

(b) hearsay: The speaker has been told that Kemal has arrived, but has not yet seen Kemal.

In Makah, presented in Jacobsen (1986:11), direct experience takes a zero marking, while indirect experience is marked with various suffixes, such as inference and quotation. In Pawnee, another Indian language, it has been reported in Parks (1976) that whether the speaker is/was an eyewitness to an event is rigidly marked regardless of his certainty or evidence.

The general tendency in the evidential systems of the worlds' languages to distinguish direct knowledge from indirect knowledge again seems to suggest the present dichotomy in linguistic coding.

III. Thetic vs. Categorical Judgement

Kuroda (1972) presents support from Japanese for the distinction between thetic and categorical judgements proposed by Franz Brentano and elaborated by Anton Marty. Thetic judgement represents simply the recognition or rejection of material in a proposition. On the other hand, categorical judgement conforms to a subject-predicate paradigm in a traditional sense and involves both the recognition of that which is to be made the subject and the act of affirming or denying what is expressed by the predicate about the subject.

According to Kuroda, a sentence with *ga* as in (18) is labeled as a thetic judgment sentence, whereas a sentence with *wa* as in (19) is considered to be a categorical judgement sentence.

- (18) Inu *ga* hashitte-iru.
 dog SUB run-be
 'A/The dog is running'

- (19) Inu *wa* hashitte-iru.
 dog TOP run-be
 'A/The dog is running.'

The thetic and categorical distinction is reminiscent of the traditional Japanese grammatical distinction between phenomenological or judgement sentences. In fact, Mio states that the structural pattern of a phenomenological sentence is nominal + *ga*, and that of a judgement sentence is nominal + *wa*. Needless to say, a phenomenological sentence parallels a thetic judgement and a judgement sentence parallels a categorical judgement.

I believe that thetic and categorical judgements could be seen to parallel the two kinds of linguistic coding under discussion.

IV. Conclusion: Linguistic Coding as Manifestation of Cognitive Psychological Dichotomy

The previous sections exhibited linguistic phenomena which suggest the two kinds of linguistic coding under discussion. Now the question is whether such linguistic phenomena that occur in several languages and their correlation to the philosophical dichotomy could be just a mere coincidence. I believe that these correlations are supported on cognitive psychological grounds, especially by the distinction between perception and cognition.

In Fodor's (1983) theory, the perception-cognition distinction parallels what he calls input systems and central systems. Roughly, the input systems perceive visual and linguistic information and present it to the central systems, while the central systems look at the information and seek what is in memory and arrive at the 'best hypothesis.' Fodor characterizes the input systems as consisting of fast, domain-specific, mandatory, and informationally encapsulated modules, while he views the central systems as operating using non-modular processes.

In a similar faculty psychological vein, Jackendoff (1989:272) distinguishes two types of cognitive processes: 'fast' or 'sensation-like' processes and 'slow' or 'thought-like' processes. 'Fast' or 'sensation-like' processes are carried out by highly specialized translation and integrative processors in short-term memory. On the other hand, 'slow' or 'thought-like' processes resemble problem-solving and hypothesis confirmation, by touching on a wide variety of domains, including long-term memory.

In conclusion, it is my contention that the two types of linguistic codings under discussion are rooted in cognitive psychology. Specifically, they are a reflection of the perception vs. cognition distinction⁵.

Notes

* The original and abridged version of this paper was presented at the 61st Annual Meeting of South Atlantic Modern Language Association. I am grateful to Professor Michael Tomasello for his discussion and direction on the development of this paper.

1 Lyons (1989:172) said that gerundive and *that*-clauses in English refer to second- and third-order entities respectively. Bolinger (1974) suggests that

bare infinitives typically represent percept and to infinitives concept.

2 Horie also notes that her dichotomy parallels Lyons' ontological distinction between second-order entities (events) and third-order entities (proposition).

3 The function of no da has been one of the most popular topics in Japanese linguistics. It has been analyzed as marking known or general knowledge. I believe that these characterizations suggest some deliberation on the speaker to evaluate information in its standing with the hearer or with the general public's knowledge.

4 This example is taken from Slobin and Aksu (1982). As they discuss, Turkish -mis has a further twist.

5 Fodor's theory is controversial. It has been countered by 'New Look' psychologists and artificial intelligence groups. However, it is interesting to note that one of the leading 'New Look' psychologists, Neisser (1987:4), came to believe that 'perception is based on the direct pickup of objectively existing information, while categorization goes beyond that information on the basis of beliefs. Thus, seeing is one thing, thinking another.'

References

- Akatsuka, Noriko. 1979. Epistemology, Japanese syntax, and linguistic theory. *Papers in Japanese Linguistics*, 6:7-28.
- Bolinger, Dwight L. 1974. Concept and percept: two infinitive constructions and their vicissitudes. *World Papers in Phonetics: Festschrift for Dr. Onishi's Kiju*, 65-91. Tokyo: Sankosha Shuppan Insatsu Kabushiki-gaisha.
- Chafe, Wallace L. 1973. Language and memory. *Language*, 49.2:261-281.
- Fodor, J.A. 1983. *The Modularity of Mind*. MA: The MIT Press.
- Horie, Kaoru. 1991. How languages encode the cognitive notion of directness and indirectness: a typological study. *Japanese/Korean Linguistics*, ed. by Hajime Hoji, 61-77.
- Inoue, Kyoko. 1978. Speaker's perspectives and temporal expressions - a case study from Japanese and English. *University of Michigan Papers in Linguistics*, 105-115.

- Jackendoff, Ray. 1989. *Consciousness and the Computational Mind*. MA: The MIT Press.
- Jacobsen William H, Jr. 1986. The heterogeneity of evidentials in Makah. *Evidentiality: the Linguistic Coding of Epistemology*, ed. by Wallace Chafe and Johanna Nichols, 3-28. NJ: Ablex Publishing Corporation.
- Josephs, Lewis. 1976. Complementation. *Japanese Generative Grammar (Syntax and Semantics 5)*, ed. by Masayoshi Shibatani, 307-370. New York: Academic Press.
- Kuno, Susumu. 1973. *The Structure of the Japanese Language*. MA: The MIT Press.
- Kuroda S-Y. 1972. The categorical and the thetic judgment: evidence from Japanese syntax. *Foundations of Language*, 9:153-185.
- Kusanagi, Yutaka. 1977. Nihongo keiyo hyogen no imi: joho teikyo to iu kanten kara no kosatsu. *Gengo Bungei Kenkyu*, 2:89-100.
- Lyons, John. 1977. *Semantics 2*. Cambridge: Cambridge University press.
- Lyons, John. 1989. Semantic ascent: a neglected aspect of syntactic typology. *Essays on Grammatical Theory and Universal Grammar*, ed. by Arnold, Doug et. al., 153-186. Oxford: Clarendon Press.
- Mio, Isago. 1948. *Kokugo-ho Bunsho-ron*. Tokyo: Sanseido.
- Nakau, Minoru. 1979. Modaritii to meidai. *Eigo to Nihongo to, Hayashi Eiichi Kyoju Kanreki Kinen Rombunshu*, 223-250. Tokyo: Meiji Shoin.
- Neisser, Ulric. 1987. *Concept and Conceptual Development (Emory symposia in cognition: 1)*. Cambridge: Cambridge University Press.
- Parks, Douglas R. (1976) *A Grammar of Pawnee*. New York: Garland publishing Co.
- Slobin, Dan I. and Ayhan A. Aksu. 1982. Tense, aspect and modality in the use of Turkish evidential. *Tense-Aspect: between Semantics and Pragmatics*, ed. by Paul Hopper, 185-200. Amsterdam: Benjamins.
- Yamada, Yoshio. 1936. *Nihon Bumpo-ron*. Tokyo: Hobunkan.
- Yamamoto, Eiichi. 1987. Ninshiki no yotai to hobun yoshiki. *Gengogaku no Shikai: Koizumi Tamotsu Kyoju Kanreki Kinen Rombunshu*, 73-89. Tokyo: Daigaku Shorin.

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MENTAL-SPACE BUILDERS IN ENGLISH AND THEIR JAPANESE COUNTERPARTS *

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1. Introduction

While English grammar easily accommodates 'mono-clausal conditional expressions', Japanese often requires that the counterparts of these mono-clausal expressions use conditional clause-linking morphology. This contrast in the mechanisms for expressing conditionality is systematic, and reflects general divergence between the two languages. The purposes of this paper are i) to examine English mono-clausal conditional sentences, as illustrated in (1) through (4) below, paying particular attention to devices for building 'mental spaces' in the sense of Fauconnier (1985); ii) to examine the counterpart expressions in Japanese, and explore the structural divergences between English and Japanese in the preferred mental space building mechanisms; and iii) to suggest several typological characteristics which may be responsible for the observed divergences.

- (1) In France Watergate wouldn't have been a scandal. (Fauconnier)
- (2) Prices should come down under free competition.
- (3) You are so lucky. My advisor wouldn't have been so patient.
- (4) A new highway would save us a lot of time.

2. English mono-clausal conditional sentences and mental-space builders

In examining conditional sentences in English, we most often pay attention to bi-clausal sentences using the IF-THEN construction, such as 'If you had been a little more careful, you would have avoided the accident,' where the IF subordinate clause constitutes the antecedent (protasis) for the consequent (apodosis) presented in the main clause. But, of course, both in Japanese and English, it is not necessary for conditional relations to be expressed by two clauses linked by conditional clause-connectives (e.g., IF, ONCE etc.).

* This paper stems in part from a project on English and Japanese conditional sentences on which I collaborated with Charles J. Fillmore in 1987-88; I have benefited immeasurably from discussions with him. But, I alone am responsible for any errors or omissions.

The first type of mono-clausal conditional to note is the case where the antecedent is presented in a certain formulaic manner with a certain prosody, and the consequent is elided, as seen in (5):

(5) If only it weren't raining ...

Tada ame sae hutte inakereba ...
only rain at least fall-ASP-NEG-COND(IF)

Both the English and Japanese utterances are to be understood as an expression of 'wish', with either the content of positive consequence or the speaker's positive evaluation being omitted at the end of the utterance. Using certain properties of the conditional construction in either case (e.g., the use of the IF ONLY construction; the use of the (R)EBA conditional construction¹ in combination with SAE) ensures this conventional interpretation without the consequent clause, thereby making the expression idiomatic.²

Another type is found where antecedents (conditions) and consequents, either explicit or implicit, are segmented across sentences, or across turns, in discourse. For example, an antecedent can be interrogative (Jespersen 1940; De Castro Campos 1981; Bowerman 1987; and Fillmore 1987). De Castro Campos (1981) and Bowerman (1987) note that the interaction — where the child asks a question, the mother confirms it, and the child then uses this agreement to draw out a plausible inference — conforms to 'the question-confirmation-implicative assertion sequence' hypothesized by Jespersen (1940) to underlie the historical development of IF-(THEN) conditionals.

Another type of mono-clausal conditional is possible where adverbs, such as THEN and OTHERWISE, are used as non-clausal antecedents to refer to and summarize the condition given in the

¹ Devices for expressing conditionality in Japanese are shown below: They include particles such as *to*, and *nara*, verb inflections such as *-tara*, *-(r)eba*, and *-temo*, and the function noun *toki* (time) and *baai* (case) optionally followed by the case-marker, *ni*, and/or the topic marker, *wa*.

S1 (subordinate clause)	{	TO NARA TARA (R)EBA TEMO TOKI (NI/WA) BAAI (NI/WA)	}	S2 (main clause)
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² A more detailed discussion of the idiomatic nature of conditional constructions can be found in Fujii (1992).

context.³ The Japanese counterpart expressions of THEN include sentence-initial DATTARA, NARA, and DEWA.⁴

- (6) Then, I'll go. (7) Otherwise, I won't go.
Dattara / Nara, watasi ga ikimasu.
Dewa / Zyaa, watasi ga ikimasu.

The types of English mono-clausal conditionals that we focus on in this paper are demonstrated in sentences (1), (2), (3) and (4) shown again below:

- (1) In France Watergate wouldn't have been a scandal. (Fauconnier)
 (2) Prices should come down under free competition.
 (3) You are so lucky. My advisor wouldn't have been so patient.
 (4) A new highway would save us a lot of time.

All of these sentences express conditional relations without using the IF-THEN construction, and more importantly, each contains an expression of the condition within the mono-clausal sentence (i.e., without containing an explicit *clausal* antecedent). In other words, in each of these sentences, either the circumstantial adverbial phrase (e.g., 1 and 2) or the subject (e.g., 3 and 4) -- here underlined -- delineates the world in which the rest would hold true, bearing a function similar to what the IF clause in the IF-THEN construction serves. Although similar meanings can be expressed using an IF-clause, as shown in the paraphrases (1P through 4P), English often seems to prefer those mono-clausal conditional expressions to bi-clausal conditional sentences.

- (1P) If it had happened in France, Watergate wouldn't have been a scandal.
 (2P) If there is free competition, prices should come down.
 (3P) If my advisor were in your advisor's position, he wouldn't have been so patient.
 (4P) If a new highway were built, it would save us a lot of time.

³ Fillmore (1987) discusses these circumstantial adverbs as one of the two kinds of nonclausal antecedents. The other discussed is the kind where 'the consequent is introduced by a conjunction, usually AND', and the antecedent is 'a *quantified expression* indicating the extent by which some unnamed changes would have a certain result', as in (i) below:

(i) One more stupid mistake like that and you'll be fired.

⁴ DATTARA and NARA are etymologically conditional forms of copula-like predicates, which are normally used as bound clause-linking morphemes. However, here they have been developed into grammatically unbound (free) morphemes, and function as sentence-initial connectives. Likewise, DEWA, etymologically a particle cluster, is here used as a free sentence-initial connective.

The rest of this section further discusses these types of English mono-clausal conditionals with respect to the devices used for building 'mental spaces' in the sense of Fauconnier (1985); we will call the linguistic devices for building mental spaces 'mental-space builders'.⁵ The meaning of 'mental space' will become clear through the discussion below.

2.1. Adverbial phrases as mental-space builders

In (1), (2), and (8) below, the adverbial phrase, which, in this case, is a prepositional phrase, expresses the state of affairs in which the proposition contained in the rest of the sentence holds true. These adverbial prepositional phrases are 'frame-setters' in that they set up a locational or situational frame of reference, taking the place of a clausal conditional antecedent. In Fauconnier's (1985) words, they are 'space-builders', in that such adverbial phrases build 'mental spaces'.

- (1) In France Watergate wouldn't have been a scandal
- (2) Prices should come down under free competition.
- (2') Prices, which should come down under free competition, do not decrease when they are bound hand and foot by controls and restrictions.

--*Tensei-jingo: Vox Populi, Vox Dei*, 1989, Asahi Newspaper.

- (8) Without her help, we couldn't have found it.

In (1), the adverbial phrase *in France* sets up a hypothetical space, where we are asked to imagine that the Watergate incident had happened in France rather than in Washington D.C. Likewise in (8), the phrase *without her help* sets up a hypothetical space, which is distinct from the real space where 'her help' was provided. The original sentence from which sentence (2) was adapted is shown in (2'). The reality discussed in this text is that prices (in Tokyo) 'are bound hand and foot by controls and restrictions', and thus 'do not decrease'. The adverbial phrase, *under free competition*, in (2), sets up a hypothetical space, presenting a contrastive circumstance where prices should come down.

Notice that sentences (1), (2) and (8), as well as some other English examples we will look at shortly, all have a conditional modal of the kind which could appear in a consequent clause; this modality clarifies that the spaces set up and described in these sentences are hypothetical (or counterfactual).

⁵ Fauconnier (1985) explores a variety of grammatical constructions that build a mental space within which an ensuing proposition holds; the 'if P' part of 'if P, then Q' is one of these space-builders.

2.2. Counteridentical subjects as mental-space builders

Next, we examine mono-clausal conditionals where the subject of the sentence introduces a hypothetical space, by taking the place of another entity (either person or object). These are a variety of counterfactual sentences which Goodman (1983: p. 6) refers to as *counteridenticals* (cf. Fillmore 1987).

For example, in sentence (3), the subject — *My advisor* — presents a hypothetical mental space, by substituting somebody else ('your' advisor) in the other individual's circumstance.⁶ In other words, the speaker's advisor ('my advisor') is hypothetically introduced into the hearer's advisor's circumstance.

- (3) You are so lucky. My advisor wouldn't have been so patient.

2.3. Subjects in causative constructions as mental-space builders

In causative constructions, the subject, which describes the cause, constitutes the condition for the rest of the sentence, which describes the effect. For example, in sentence (4), the qualified subject, *a new highway*, presents the condition for the rest of the sentence, once again taking the place of the clausal conditional antecedent.⁷

- (4) A new highway would save us a lot of time.

(4P) If a new highway were built, it would save us a lot of time.

Another piece of data (9) comes from a T.V. commercial for a new cereal, called Nutri-Grain Nuggets, which is compared with a similar brand, called Post Grape Nuts.

- (9) <In a T.V. commercial advertising 'Kellogg's Nutri-Grain Nuggets'>

<the initial remark>

- (9a) Once you taste new Kellogg's Nutri-Grain Nuggets, you'll forget about Post Grape Nuts.

<the final remark>

- (9b) The taste will make you forget your old nuggets.

What is interesting about the discourse of this commercial is that it initially uses the bi-clausal sentence with the connective ONCE (see sentence 9a), to relate the condition (tasting the new brand of cereal) and

⁶ As noted by Fillmore (*ibid*), the hypothetically introduced individual, '*my advisor*' in this case, has prosodic salience.

⁷ The causative version, of course, might not be as detailed as the bi-clausal conditional version. Thus, (4P) is just one of possible paraphrases of (4).

the result (forgetting about the old brand of cereal); the concluding remark shown in (9b), on the other hand, uses a causative construction to repeat the same idea. This causative sentence can be paraphrased as 'If you taste Nutri-Grain, you will forget your old nuggets.' This pair of sentences exemplifies the fact that English allows flexible alternation between these constructions.

Causality is an indispensable issue in the study of conditionals; to the extent that it is intrinsic to the meaning of conditionality (c.f., Mackie, 1965). Thus, the question of how and what kinds of causal meanings figure in various conditional sentences has been one of the central issues in the study of conditionals (c.f., Comrie 1987, Sweetser 1990). Causative constructions, of course, also express cause-effect relations. The examinations of these two apparently different grammatical constructions, namely bi-clausal conditionals and causatives, should prove a fruitful area of inquiry, especially when we compare the preferred event representation patterns crosslinguistically (see Section 3.3. below).

3. Japanese conditional sentences and their typological characteristics

Now we turn our attention to Japanese conditional sentences, to examine the Japanese ways of building mental spaces and expressing conditionality. Japanese differs from English in that it prefers different grammatical mechanisms for expressing conditionality from those in English, as exhibited in (1) through (4), and discussed earlier. The tendency is for the Japanese counterparts of English mono-clausal conditionals to generally involve two clauses and explicit conditional clause-linking morphemes.

The Japanese counterparts of English sentences (1), (2), (3), (4) and (9b) discussed in section 2 are given in (10) through (14) below. (10) and (11) are the counterparts of English sentences (1 and 2), in which prepositional phrases set up the mental spaces. (12) is the counterpart of the counterfactual case, (3). (13) and (14) are the counterparts of the causative cases, (4) and (9b).

- (10) *Furansu de dattara wootaageeto-ziken wa* <= (1)
 France-IN copula-COND Watergate-incident-TOPIC
mondai ni naranakatta (daroo) yo.
 problem-DAT become-NEG-PAST (MODAL). Particle
 (In France Watergate wouldn't have been a scandal.)

- (11)⁸ *Kakaku wa ziiyuuna kyoosoo no moto de nara sagaru hazu da.*
 price-TOPIC, free, competition-GEN, under, copula-COND, come down, should
 ((If they are) in free competition, prices should come down) <= (2)
- (11a) *Kakaku wa ziiyuuna kyoosoo no moto de wa sagaru hazu da.*
 price-TOPIC, free, competition-GEN, under, TOPIC, come down, should
- (12) *Boku no adobaizaa dattara (nara) kessite sonnani* <= (3)
 my-GEN, advisor, copula-COND, never, to that extent
gaman wa site-kurete-inakatta (daroo) yo.
 'be patient for me-ASP-NEG-PAST, (MOD) Particle
 (My advisor wouldn't have been so patient.)
- (13) *Atarasii haiuee ga dekireba* zuibun zikan no <= (4)
 new, highway-NOM, be built/be completed, a lot of time-GEN
setuyaku ni naru (daroo) (ne).
 saving-DAT, become, (MOD) (Particle)
- (14) *Kono azi o sireba,* mukasi no nagetto nado <= (9b)
 this taste ACC know-COND old nuggets
wasurete-simau (daroo).
 forget (MOD)

Notice that all of these Japanese sentences contain conditional markers, which are normally used as clause-linking morphemes (i.e., TARA in (10) and (12), NARA in (11), and (R)EBA in (13) and (14)). General statements such as sentence (11a) could be expressed with the topic marker WA, instead of NARA. But it would be difficult for the other sentences to express 'conditionality' without marking the conditional adverbial adjuncts with these conditional linkages.

I have to add here that it is not simple to determine the syntactic status of each of these adverbial adjuncts in these Japanese conditional sentences. For example, do we analyze 'boku no adobaizaa dattara' in (12) as a genuine subordinate clause, or a constituent of the main clause? The answer, perhaps, depends on the syntactic theory which we use to describe it.⁹

⁸ The original Japanese sentence from which this sentence was adapted is given below:

Ziiyuuna kyoosoo no moto de nara sagaru hazu no kakaku mo, kisei de ganzigarama no zyootai dewa sagaranai.

--Tensei-jingo: Vox Populi, Vox dei, 1989, Asahi Newspaper.

⁹ For example, to capture the difference in syntactic status between 'boku no adobaizaa dattara' in (12) and 'Atarasii haiuee ga dekireba' in (13), Role and Reference Grammar (Foley & Van Valin 1984; Van Valin 1984) might treat the former linkage at the 'core' level while treating the latter at the 'clause' level. The

But aside from the syntactic analysis of the different types of linkage (which we need to explore in another context), the point to be made here is that Japanese, by using conditional linkage, marks the mental-space builder (antecedent), whereas English does not have to mark the mental-space builder with a conditional expression. This contrast in the mechanisms for expressing conditionality is systematic, and reflects general divergences between the two languages, in particular, regarding i) the mechanisms for expressing modality; ii) the clause-linking mechanisms; and iii) the argument structures.

3.1. Different mechanisms for expressing conditional modality

First, mechanisms for expressing conditional modality are different.

In English, when the main clause has a conditional modal, the 'conditionality' of the sentence as a whole is made apparent, and it becomes possible to omit an explicit antecedent clause and still have the sentence be understood as having a conditional meaning.¹⁰

Unlike English, Japanese does not have any clear modal which makes 'conditionality' explicit in the main clause *per se*. Instead, 'conditionality' is made explicit by marking the antecedent adjunct which delineates the condition. In a sense, conditional clause-linking markers in Japanese take the place of modal expressions semantically. Thus, in Japanese sentences (10) through (14), the modal expression DAROO is optional as long as the antecedents are marked with appropriate conditional linkages.

3.2. Different clause-linking mechanisms

Second, clause-linking mechanisms in general are different.

Japanese conditional markers are clause-linking morphemes; in fact, most of them are verb endings, unlike the free-standing English IF. In addition, Japanese clause-linking morphemes appear at the end of the subordinate clause, immediately preceding the main clause — a feature common among verb-final and head-final languages. These facts, taken together with the capability of free ellipsis in Japanese, enable not only full clauses but also various kinds of truncated clauses (phrases on the surface) to be marked by these linking morphemes and delineate mental-spaces.

hierarchical theory of linkage in Minami's Grammar (Minami 1964, 1974) might categorize the former as a 'Type A linkage', and the latter as a 'Type B linkage'.

¹⁰ This idea was first presented in a plenary speech entitled 'Mysteries of Conditional Sentences in English and Japanese', by Charles J. Fillmore, in collaboration with Seiko Yamaguchi Fujii, at the Annual Meeting of the ATJ (Association of Teachers of Japanese) in San Francisco, March 1988.

To look at this Japanese characteristic, let us here examine some of the subtleties involved in counteridentical cases.

Fillmore (1987) discusses two kinds of situations in which a sentence like (15) can be used:

(15) If I were your father, I would spank you.

It can be uttered 'first, by somebody who would like to be in the father role, so that he could effect a punishment which the real father is apparently unwilling to do; and second, by a temporary caretaker who wants the child to be grateful for his lenient tendencies, since the real father in this situation would be more punitive.' (*ibid* p. 181). As noted by Fillmore, prosodic salience would go with either 'I' or 'YOUR FATHER', which designates the individual to be hypothetically introduced into the other individual's circumstances.

(16) Watasi ga kimi no otoosan dattara, hippataite osioki suru yo.
I NOM you GEN father copula-TARA(COND), spank punish PART
(If I were your father, I would spank you.)

First reading of (15): <Your father doesn't spank you, but if I were taking your father's position, I would spank you.>

(17) Watasi dattara, hippataite osioki suru yo.
I copula-TARA(COND), spank-punish PART
(I would spank you.)

(17') ... osioki sitai yo. (# nasaru yo. / # sitagaru yo.)

Second reading of (15): <I don't spank you, but if your father were here, he would spank you.>

(18) Kimi no otoosan dattara, hippataite osioki suru yo.
your father copula-TARA(COND), spank-punish PART
(Your father would spank you.)

(18') ... nasaru yo. / ... sitagaru yo. (# osioki sitai yo.)

The Japanese sentences which could be uttered in the two situations possible in (15) are shown in (16) through (18) above. Sentence (16), which is an equivalence of the English sentence (15), containing a full clause antecedent, can be uttered in either situation, as in (15). But, as shown in (17), with the truncated antecedent *Watasi dattara* (*watasi*, 'I', followed by *DATTARA*), only the first interpretation is possible. The sentence with another truncated antecedent *Kimi no otoosan dattara* (*kimi no otoosan* 'your father'

followed by DATTARA), as in (18), is uttered only in the second situation.¹¹

The exclusive readings of these truncated antecedents show that the hypothetically introduced individual (the mental-space builder) is marked by the conditional marker, DATTARA¹². In addition, by virtue of this marking, the hearer knows that the speaker has set up and is talking within the hypothetical space, even though the main clause does not contain any specific conditional modality.

3.3. Different argument structures and transitivity

Finally, argument structures of verbs are different.

To look at this difference, we will examine the Japanese style of expressing causations, by comparing some Japanese conditional sentences (taken from a high school science textbook) and their English translations (19 - 21).¹³

In each pair of English translations, translation A is a first translation produced by a native Japanese speaker fluent in English; translation B is a later version produced by a team - including native English speakers - which edited the first translation to make it sound more natural and stylistically appropriate in English discourse.

- (19) *Tikara no heekoo sihenkee no kankee o tukau TO,*
 power GEN parallelogrammic relations ACC use WHEN/IF
hitotu no tikara o, kore to onazi hataraki o suru
 'one power' ACC this same as function ACC do

¹¹ Another case in which the sentence gets only one reading is when a certain property of the main-clause verb identifies the subject - whether it is a first person (*I*) or a third person (*your father*), as pointed out by Yoko Hasegawa (personal communication). For example, sentence (16) with '*sitai*' only gets the first reading, whereas, with '*sitagaru*' or '*nasaru*' (honorific), it only gets the second reading. Thus, notice that '*sitai*' can appear in sentence (17) but not in (18); '*sitagaru*' or '*nasaru*' can appear in (18) but not in (17), as shown in (17') and (18').

¹² I am using only examples with TARA here, but other conditional markers (e.g., NARA) can also be used similarly.

¹³ The on-line text of this science textbook (written in Japanese, and used by junior high school students in Japan) was made available by the Communications and Information Processing Laboratory, Nippon Telegraph and Telephone Corporation (NTT), Yokosuka, Japan. Sponsored by NTT, this text was used in a larger project on Japanese and English clause-linkage, directed by Charles J. Fillmore, in collaboration with Seiko Yamaguchi Fujii, Yoko Hasegawa, Kyoko Hirose, and Katsuya Kinjo at the University of California, Berkeley.

As part of the project, the original Japanese text was translated into English by a team of bilingual speakers of Japanese and English; first by the native speakers of Japanese, then by the native speakers of English. Translation and editing took place through active verbal interaction, with the team (normally four to five participants) recording the various versions of the translations.

hutatu no tikara ni wakeru koto ga dekiru.

'two power' DAT divide can (potential)

(19A) When we use forces' parallelogrammic relations, we can divide one single force into two forces which function the same way as the original force does when they get together.

(19B) Exploiting the relationships in a parallelogram of forces enables us to decompose a single force into two forces which produce the same effect.

(20) *Sankagin o kanetu suru TO, gin to sanso ga dekiru.*

silver dioxide ACC heat WHEN/IF silver and oxygen NOM be produced

(20A) When one heats silver dioxide, silver and oxygen are produced.

(20B) Heating silver dioxide produces silver and oxygen.

(21) *Pasukaru no genri o ooyoo suru TO,*

Pascal GEN principle ACC apply WHEN/IF

tiisana tikara o ookina tikara ni kaeru koto ga dekiru.

small force ACC great force DAT change can

(21A) By applying Pascal's principle, we can transform a small force into a large force.

(21B) An application of Pascal's principle allows us to transform a small force into a large force.

Notice that the first version (A) preserves the bi-clausal structure of the original Japanese sentences. In each case, the adverbial clause constitutes the antecedent, expressing the condition (or cause). In version (B), on the other hand, the part taking the grammatical subject position — whether sentential or non-sentential subject — delineates the condition. These pairs of English sentences show not only that alternation is possible, but also the causative version is sometimes considered more appropriate in scientific discourse in English.

Both versions (A) and (B), as well as the Japanese original text, express relations of causation and enablement between two events. But, whereas English can do so by using such verbs as *enable*, *produce*, and *allow*, the meanings of which directly show the relations of enablement, Japanese relies on the clause-linking construction marked by the TO particle.

In Japanese, the causative version is often not possible because Japanese tends not to use an inanimate subject for a transitive verb, especially for a causative verb. Thus, certain argument structures -- as seen in the English sentences (4), (9b), (16B) - (18B) -- are unnatural in Japanese. Even when verbs which can take such argument structures are available, in Japanese causative versions are obviously not a

preferred event representation pattern, due to its general tendency toward lower transitivity.¹⁴

4. Conclusions

We have shown that whereas English grammar easily accommodates mono-clausal conditional expressions, Japanese often requires that the counterparts of these expressions use conditional clause-linking morphology. This contrast in the mechanisms for building mental-spaces and expressing conditionality is systematic, and reflects general typological divergences between the two languages, in particular, regarding i) the mechanisms for expressing modality; ii) the general clause-linking mechanisms; and iii) the argument structures and transitivity. Unlike English, Japanese does not have any clear modal which makes 'conditionality' explicit in the main clause alone. Instead, 'conditionality' is expressed by marking the space-building antecedent with a clause-linking morpheme; in a sense, clause-linking mechanisms in Japanese often take the place of modal expressions semantically. In addition, unlike English, Japanese clause-linking morphemes appear at the end of the subordinate clauses, enabling various kinds of truncated clauses marked with these linking morphemes to delineate mental-spaces. Furthermore, unlike English, the Japanese style of expressing causation uses conditional clause-linking constructions, instead of causative constructions. This style reflects the tendency of the Japanese language toward lower transitivity, and its event representation pattern, as well as its different argument structures of verbs.

REFERENCES

- Bowerman, Melissa. (1986). First Steps in Acquiring Conditionals. In E.C. Traugott, A. Meulen, J.S. Reilly and C.A. Ferguson (Eds.), On conditionals (pp. 285-308). Cambridge: Cambridge University Press.
- Comrie, Bernard. (1986). Conditionals: a Typology. In E.C. Traugott, A. Meulen, J.S. Reilly and C.A. Ferguson (Eds.), On Conditionals (pp. 77-99). Cambridge: Cambridge University Press.

¹⁴ It has been noted that Japanese tends toward lower transitivity, compared with English. This tendency has been discussed in various approaches, including analyses of morpho-syntactic properties and case markings of intransitive and transitive verbs (Jacobsen 1982, 1985; Sugamoto 1982; Teramura 1978), and analyses of fine-grained lexical semantics of verbs (Ikegami 1985). Ikegami (1981, 1982, 1991), among others, has also investigated the issue of agentivity and transitivity from the point of view of event realization patterns, which Ikegami attributes to the cultural rhetorical patterns.

- de Castro Campos, Maria Fausta P. (1981). On Conditionals as Dialogue Constructs. Paper for International Encounter in the Philosophy of Language. State University of Campinas, Brazil.
- Fauconnier, Gilles. 1985. Mental Spaces: Aspects of Meaning Construction in Natural Language. Cambridge, MA: M.I.T. Press.
- Fillmore, Charles J. (1987). Varieties of Conditional Sentences. Proceedings of the Third Eastern States Conference on Linguistics (pp. 163-182) Columbus: Ohio State University.
- Foley, William & Van Valin, Robert. (1984). Functional Syntax and Universal Grammar. Cambridge Studies in Linguistics, 38. Cambridge: Cambridge University Press.
- Fujii, Seiko Yamaguchi. (1992). On the Idiomaticity of Conditional Constructions in Japanese. In Boulanger, J. & Ouelton, C (Eds.), Proceedings of the Fifteenth International Congress of Linguists, Québec, Canada.
- Ikegami, Yoshihiko. (1981). SURU to NARU no Gengogaku [Linguistics of DOING and BECOMING]. Tokyo: Taishuukan.
- Ikegami, Yoshihiko. (1982). *Hyoogen Koozoo no Hikaku: SURU-teki na gengo to NARU-teki na gengo* [Contrast of Linguistic Representation Types: 'DO-language' and 'BECOME-language']. In Tetsuya Kunihiro (Ed.), Nichieigo-hikaku-kooza : Hassoo to Hyoogen [Japanese-English Comparative Grammar]. 286-326. Tokyo: Taishuukan.
- Ikegami, Yoshihiko. (1985). 'Activity'-'Accomplishment'-'Achievement': A Language That Can't Say 'I Burned it, But It Didn't Burn' And One That Can. In Adam Makkai, & Alan K. Melby (Eds.), Linguistics and Philosophy: Essays in Honor of Rules S. Wells. 265-304. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Ikegami, Yoshihiko. (1991). 'DO-language' and 'BECOME-language': Two Contrasting Types of Linguistic Representation. In Yoshihiko Ikegami (Ed.), The Empire of Signs: Semiotic Essays on Japanese Culture. 286-326. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Jacobsen, Wesley. (1982). Transitivity in the Japanese Verbal System. Indiana: Indiana University Linguistics Club.
- Jacobsen, Wesley. (1985). Morphosyntactic Transitivity and Semantic Markedness. In CLS 21: Papers from the Parasession on Causatives and Agentivity. Chicago: Chicago Linguistics Society.
- Jespersen, Otto. (1940). A Modern English Grammar on Historical Principle, Vol. v.: Syntax. London: George Allen and Unwin.
- Mackie, J. L. (1965). Cause and Conditions. American Philosophical Quarterly, 2(4), 245-264.
- Minami, Fujio. (1964). Fukubun [Complex sentences]. Tokyo: Meijishoin.
- Minami, Fujio. (1974). Gendai Nihongo no Kozo [The Structure of Modern Japanese]. Tokyo: Taishukan.
- Sugamoto, Nobuko. (1982). Transitivity and Objecthood in Japanese. In Paul J. Hopper, & Sandra A. Thompson (Eds.), Syntax and Semantics, Vol 15: Studies in transitivity. New York: Academic Press.
- Sweetser, Eve. (1990). From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure. Cambridge: Cambridge University Press.
- Teramura, Hideo. (1978). 'NARU' hyoogen to 'SURU hyoogen: Nichiei 'tai' hyoogen no hikaku. In Nihongo To Nihongo-kyoiku [Japanese and Japanese Language Education]. Tokyo: Kokuritsu Kokugo Kenkyuusho.
- Van Valin, Robert. (1984). A Typology of Syntactic Relations in in Clause-linkage. BLS 10.

WINNER OF PRE-DOCTORAL COMMENDATION

JACKENDOFF'S COGNITIVE LINGUISTIC THEORIES

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Introduction. This paper examines the cognitive linguistic theories of Ray Jackendoff and compares them with the ideas of cognitive-stratificational linguistics as developed over the past thirty years. It assumes in the reader a familiarity with the general outlines of stratificational approaches and so will concentrate on describing Jackendoff's views and their similarities to stratificational theory. The major purpose of this paper is to suggest to LACUS members interested in cognitive linguistics that reading Jackendoff's writings is both interesting and intellectually profitable.

Jackendoff's theories are explicated in a number of works published mostly in the 1980's, of which the most significant for this paper's purposes is *Consciousness and the Computational Mind* (1987a). Most references to his work in this paper will be to that volume. Other significant works by Jackendoff on the same topic include *Semantics and Cognition* (1983), *Semantic Structures* (1990), and a number of articles published between 1978 and 1989, a listing of which can be found in the bibliography of this paper. References to Jackendoff's writings will henceforth be noted by the date as given in the bibliography.

Historical Background. In the early 1970's, Jackendoff published works on semantics in the interpretivist framework favored by Chomsky. Stratificational linguists who were interested in cognitive issues were naturally little influenced by this theoretically narrow work, while Jackendoff entirely lost touch with stratificational theory (Dave Kathman, personal communication). Now that Jackendoff has also come to be interested in cognition, points of agreement between these independently developed theories will be especially significant, as they will lend credence to the idea that such conclusions follow naturally from the evidence considered by linguists.

The development of Jackendoff's views can be followed through his publications. Throughout the 1970's, he wrote not only on Chomskyan interpretive semantics but also on narrower issues in Chomskyan syntax, notably X-bar theory (see bibliography for representative publications). In the late 1970's, he began to be more and more interested in semantics and cognition and eventually in more general questions of the organization of language in the mind, the relation of language to other systems in the mind, and the nature of thought. These developments represented a shifting of emphasis away from the more narrow generative syntax and phonology of Chomsky without implying any

abandonment thereof. Jackendoff (1989:69) states, "My purpose--the characterization of the mental resources that make possible human knowledge and experience of the world--is conceived as an extension of Chomsky's goals." Recognizing, however, that his views are at variance with Chomsky's in at least some details (1989:68), he believes that he has "pushed Chomsky's approach to its logical extreme" (1983:xii) rather than contradicted it. And indeed, while the variance is evident, so too, at least in some details, is the correspondence with narrower generative theory.

Jackendoff's Theory of Linguistic Structure. A paper the length of this one can by no means do justice to the considerable body of work that Jackendoff has produced on this topic. As stated before, the most comprehensive presentation of his ideas is to be found in Jackendoff (1987a). Much of that text is concerned with issues which are beyond the range of this paper, such as the nature of consciousness, but in answering that question Jackendoff brings in considerations which are of interest to us, namely the way in which language is structured and functions in the human mind, how it is connected to other mental systems, how their structure and function is similar to that of language, and how the mind is related to the brain. All of these are issues which are of primary importance in cognitive-stratificational linguistics. It is to the structural theory of language that I will turn in this section.

The first question which any theoretical linguist must be concerned with is what sort of precise meaning the term "language" can be held to have. At least since Saussure's time, linguists have thought of language as a system underlying speech. Thus, a linguistic description is a description of that system. Yet it is well-known by now that there are no acoustic counterparts to phonemes, morphemes, words, or sentences; i.e., there is no structure in speech stream itself corresponding to the structure in language descriptions. This has led some linguists to suppose that there is no such thing as linguistic structure. A response to that claim has been that the structure exists, not in reality external to speakers, but in the human mind, which in most people's opinions means ultimately in the human brain. This point of view was clearly expressed in Hockett (1948), and was later adopted by Chomsky.

Jackendoff accepts this latter point of view. Discussing phonology, he points out that there are no boundaries between phonemes, syllables, words, etc., yet the speaker believes that there are. Hence, "the fact that people segment the speech stream into discrete linear elements leads us to posit a level of mental representation, *phonological structure*, in which such segmentation does exist" (1987a:58). And this level of structure is to be found in the mind. To Jackendoff, this is an autonomous but not isolated structural level, with its own primitives and rules of combination which are independent of but not unrelated to other levels of linguistic structure.

There are two significant points to be made about Jackendoff's independent phonological level. First, as Jackendoff

(1987a:72) points out, it conflicts with earlier generative phonology, which derived all phonological patterns from grammatical ones. In the past twenty years, many generative phonologists have rediscovered the autonomy of phonology, apparently unaware that theories as long established as tagmemics had already recognized the independence of phonological structures. Jackendoff follows the trend toward an independent phonological level, and so in one way sets himself apart from earlier generative phonology and more in accordance with certain non-Chomsky-Halleian trends.

A second important aspect of Jackendoff's phonological theory is his assessment of its psychological reality. His phonological descriptions use rules and symbols to specify the permissible phonological structures; the rules apply in order to derive surface phonological structures from underlying ones. However, "although these rules 'apply' in an 'order', there is no implication that they are temporally ordered in active processing. Rather, rule ordering is the formal device that determines the way rules interact;.... Like the templates for permissible syllable structures, the rules and their orderings express generalizations about the structure of the language, but their role in active language use is at present unknown" (1987a:62-3). Furthermore, it is not the formal items themselves which are significant: "It is not as though, for example, some neuron can be found that has a little label [+voiced] on it.... What is significant, though, is the organization of the symbols. Their combinatorial properties reflect a system of distinctions and oppositions that are claimed to play a role in psychologically real data structures. For instance, the notational opposition of [+voiced] to [-voiced] is meant to claim that there is a two-valued dimension in which speech segments can vary; this is distinguished from an independent dimension that is notated as the feature [$\ast$ stop]; and each of these participates in the overall system in its own characteristic way." (1987a:64).

We find the same ideas reflected in Jackendoff's presentation of the other autonomous but interrelated levels of cognitive linguistic structure. In syntax the primitives are lexical and phrasal categories and the notion of constituent, and the principles of combination are immediate domination and linear ordering (1987a:69). Underlying syntactic structures, like underlying phonological structures, can be generated using formation rules (here, phrase structure rules), and surface forms can be derived from them by derivational (here, transformational) rules, which apply in order (1987a:70-72). But again, "current views of syntactic structure regard the phrase structure rules and transformational rules (if any) as together describing a set of structures that are related on the one hand to phonological structure and on the other to semantics. Neither kind of rule need be actively involved in processing: they simply constrain the set of available structures" (1987a:73).

The same is true, moreover, of the semantic, or conceptual level. This level is independent of the phonological and

syntactic levels. Its structures can be constructed out of a set of primitives and principles of combinations, but this formal structural descriptive apparatus should not be confused with a processing theory (1987a:122). However, there is much more to Jackendoff's semantic theory than this; it has been perhaps his major area of interest for the past ten or more years, resulting in two full-length books, *Semantics and Cognition* (1983) and *Semantic Structures* (1990), as well as several articles. Especially significant for this paper's purposes are the following aspects of his semantic theory.

First, Jackendoff, in contrast with most generative grammarians, holds that the distinction between semantics and pragmatics is not a principled one; this is one reason he often uses the term conceptual rather than semantic structures. Second, he argues quite strongly that meaning, and boundaries between meanings, must be in the mind rather than in the world. "The continuous flow of matter in the physical world does not on the whole come neatly segmented into events, as language would have it; nor does it seem plausible that the physical world contains manners segregated from the actions whose manners they are. Rather, these ways of dividing up the world seem a product of our means of perception and cognition" (1985:24). It therefore follows that "the information that speakers can convey is about their construal of the external world, where one's construal is the result of an interaction between external input and the means available to internally represent it. Moreover, since one's construal of the world is heavily mediated by complex computational processes which have nothing whatever to do with language (see Marr, 1982, on vision, for example), the semantics of natural language is more revealing of the internal representation of the world than of the external world *per se*" (1985:23-4).

A third significant aspect of Jackendoff's conceptual level is that it is not strictly linguistic. It is connected to the linguistic system, to be certain; indeed, phonology and syntax simply "serve as way stations" whose function is to relate acoustic signals and concepts (1987a:121). However, it is also plain to Jackendoff that the conceptual system must be connected to other faculties, such as the visual, auditory, and olfactory systems (1987a:124-5). Thus, conceptual structure is the interface between all the other cognitive modules, of which language is but one.

Thus far, we have sketched out a linguistic theory with three autonomous levels, each with its own principles of patterning, one of which, the semantic, is not purely linguistic. However, there is still quite a bit missing. We must, obviously, "consider what an act of perceiving and understanding an utterance must entail at a minimum. The external stimulation on the organism is a sound wave, which is transduced by the ear into acoustic information. Understanding the utterance requires this acoustic information ultimately to be mapped into a semantic structure that encodes the meaning of the utterance. But what

procedures are available to accomplish this mapping? The organization of linguistic structure dictates that the only possible way to translate consistently and productively from sound to meaning is to invoke the correspondence rules, mapping acoustic information into phonological structure, then phonological structure into syntactic structure, then from syntax into meaning" (1987a:91-2). These correspondence rules, as Jackendoff defines them, are "principles of translation between a pair of levels of representation" (1987a:92). Moreover, "language production provides the other side of the coin. The initial step in production is presumably the formulation of a semantic structure--an intended meaning. The final step is a sound wave, which is a physical consequence of motions of the vocal tract. The job of the computational mind in production is therefore to map from a semantic structure to a sequence of motor instructions to the vocal tract. Again, the logical organization of language requires that this mapping be accomplished in stages, mapping from semantic structure to syntax, thence to phonology, thence to motor information." (1987a:92). The correspondence rules, therefore, must be bidirectional, except for those relating phonological structures to acoustic information and to motor information, respectively. Moreover, unlike the formation rules for each level, which are purely formal descriptive devices, correspondence rules "indicate relationships among structures that must be computed actively in the course of understanding or speaking a sentence" (1987a:67). Note that the rule and symbol notation is still merely a descriptive device, but here it is used to model cognitively real relationships.

The theory as presented so far can be summarized as in Figure 1, below. Figure 1 is based on similar figures found throughout Jackendoff's publications (e.g., 1987a:67,92,125; 1987b:373; 1989:78). Although it leaves out a few details of the theory, so too do some of Jackendoff's own diagrams; Figure 1 represents the common core which is fundamental to his theory of language and the mind.

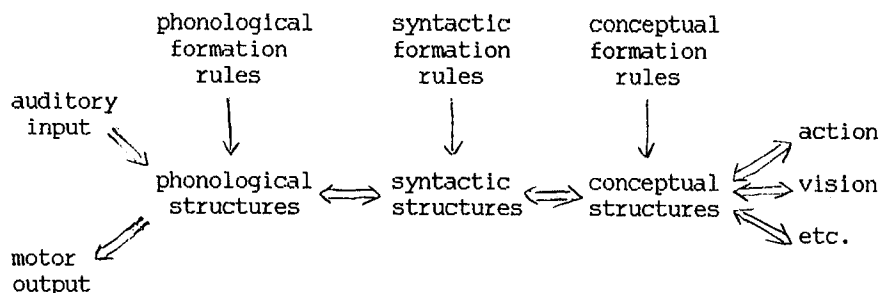


Figure 1

The single arrows represent purely formal formation rules which are used by some linguists to generate, but not necessarily

by speakers and hearers to produce structures; the double arrows represent cognitively real correspondence relations, which can conveniently be represented as rules.

Since he is working in a generative framework, Jackendoff is aware that critics will notice the absence of an autonomous lexicon in his framework. His answer is that there should be no autonomous lexicon: "a lexical item establishes a correspondence between well-formed fragments of phonological, syntactic, and conceptual structure; that is, the lexicon is a part of the correspondence rule component" (1989:79-80).

These, then, are the essentials of Jackendoff's theory of linguistic structure: language is a system in the mind comprising three independent levels, each with its own set of structural patterns which can be defined for descriptive purposes using a formal rule and symbol notation. The structural patterns generated by such a descriptive device are psychologically real, although the generating device need not be, and probably is not; nor does the symbolic representation imply a neurological symbolic representation. The psychologically real aspects of the system are the structural patterns themselves and the patterns of correspondence between independent levels of structural patterning. These parts of the system are necessary to a processing model, to which we now turn.

Jackendoff's Theory of Linguistic Processing. As a preliminary, we must examine the distinctions Jackendoff makes between structural and processing theories, and why he thinks it fruitful to separate the two. To begin with, Jackendoff states that both structural and processing theories are "essential to a complete theory, but it is important to appreciate their distinctions" (1987a:37). Briefly, we can view "a structural theory as a description of the form of the information being processed, and a processing theory as a description of how the information is processed" (1987a:38-9). A theory which tries to explain production and comprehension of speech must obviously include the processing mode. As for structure, Jackendoff claims "(1) that the availability of structure has a facilitating effect on processing; (2) that particular structures must be available for a number of tasks; (3) that we can find evidence for structure even when we are not sure what processing purpose it serves; and (4) that the study of structure per se reveals organization that could not be envisioned within the framework of a process description" (1987a:44). Within an abstractly descriptive system such as Jackendoff's, all of these points serve as methodological justifications for the arbitrary structure/process distinction. The similarities of the distinction to langue/parole, competence/performance, and similar linguistic oppositions are obvious.

Jackendoff lays greater emphasis on structure than on processing, but he does attempt to describe how processing must function, given the structure he has outlined. In Chapter 6 of Jackendoff 1987a (91-120) he considers a number of possible processing models: bottom-up for comprehension, top-down for production, sequential or parallel for both. He concludes, based

on a wide range of evidence, that none of these is sufficient, that interactive top-down and bottom-up parallel processing is necessary for an accurate model of both comprehension and production. I will omit the details of his arguments, but I will note his theory's correspondence with his observation that "computation in the brain can be carried out in massively parallel fashion, with many processes going on at once and mutually affecting each other" (1987:34). We therefore see that Jackendoff is concerned to make his theories correspond to what is known about brain function.

Brain, Mind, and Levels of Abstraction. The previous observation brings to the forefront issues which I have thus far ignored, the relation of mind to brain, and the level of abstraction in which it is proper to frame linguistic descriptions. Jackendoff discusses these questions in great detail. To begin with, he makes it plain that he is interested in the computational mind, a term which I have occasionally quoted without defining it. The "computational notion of mind treats the mind as in information-bearing and information-processing system. The mind in this sense acts as the locus of understanding, knowledge, reasoning, and intelligence" (1987a:3). It is contrasted with the phenomenological mind, "the mind as the seat of conscious awareness" (1987a:3). Thus, the question for Jackendoff is, what is the best way to describe the structure and function of an information-bearing and processing system?

The answer, for Jackendoff, is suggested by an analogous comparison of the brain to a computer. Not that Jackendoff believes that computers and brains are identical; on the contrary, he discusses four fundamental and obvious differences between them, and asserts that there are many more. Thus, one should not confuse a computational theory, which describes combinatorial properties of a complex device such as a brain or a computer, with a computer theory, which is a narrower term applied only to modern general-purpose computers (1987a:33-6). Yet the comparison remains valid, in the following way: "just as we need not deal with the actual wiring of the computer when writing our programs, so we can investigate the information processed by the brain and the computational processes the brain performs on this information, independent of questions of neurological implementation. This approach is often called *functionalism*; the idea behind this term is that the function rather than the physical substance of the brain is significant in studying the mind" (1987a:15).

Essentially, Jackendoff is saying that a computational description is a useful abstraction away from the complexity of physical devices such as computers and brains; such an abstraction allows us to understand something of their function even if we don't know too much about their physical instantiation. Of course, a computational description is only useful for complex devices; in considering the operation of a thermostat, for example, "we want to know by what physical means it switches the furnace on and off" (1987a:31). But the same is not true for

computers and human (though not, perhaps, earthworm) brains, "whose behavior involves the combinatorial properties of millions of switching devices of a relatively small number of different types. Here the description of the individual components takes a back seat to the description of their interactions, and so the computational description is dominant. (Still, of course, the physical components must be described in the end.)" (1987a:31).

The parenthetical comment at the end of the last quote is perhaps the most significant, for it makes plain Jackendoff's view that a formal description of information structures and processing, divorced from physical instantiation, is ultimately only a convenient abstraction. Nevertheless, he points out the inability of contemporary neuroscience to accurately describe the physical function of the brain, and so regards formal abstract theorizing about the mind as the most fruitful current area of cognitive research. He is particularly dubious about the value of network descriptions, because "if complexity grows by increasing the connections among elementary units in regimented ways..., there comes a point where physical descriptions are less revealing than formal combinatorial descriptions" (1987a:31). However, we should point out that Jackendoff's assessment of networks is based principally on neural network theory and also Langacker's Cognitive Grammar, since he is unacquainted with modern cognitive-stratificational linguistics.

Modularity and Uniformity. A final significant question for cognitive linguistics is, how is the linguistic system similar to and how is it different from other cognitive systems? We have already seen that Jackendoff considers the computational mind to be composed of independent modules, which are, however, interconnected, especially via the conceptual interface. The language faculty, at least, comprises two distinct levels, syntax and phonology, and is connected at one end to concepts and the other to both the motor and auditory systems. How similar, then, is the organization of the language module to the other modules?

Jackendoff discusses two such modules, the visual faculty and the musical faculty, at great length (1987a:163-245; see also Lerdahl and Jackendoff 1983). His conclusion is that the three modules he has discussed, as well as all other cognitive systems, are organized in much the same way. Each is composed of one or more levels of representation (e.g., phonology and syntax in language). As for the levels, "each is characterized by a set of formation rules that characterizes its primitives and principles of combination. The levels are linked by correspondence rules that permit translation from one form of information into another" (1987a:247). "The lowest levels of structure are, roughly, those that interface most directly with the physical world: the retinal array and the like on the input side, instructions to muscles on the output side. The highest-level ones, still more roughly, are those that represent the greatest degree of abstraction, integration, and generalization vis-à-vis sensory input; intuitively, we would like 'thought' to consist of computations over a fairly central level of representation" (1987a:47).

Jackendoff's macrotheory of mental organization may be summarized as follows: the mind consists of a large number of distinct levels of mental information, similar in that they are composed of combinatorial properties, but different in their specific organization, related to one another by correspondence relations, connected at the bottom to external interfaces and at the top to concepts, and divisible into a number of modules corresponding to separate faculties.

Innateness. A final significant element of Jackendoff's cognitive theories is his emphasis on innateness. He advances the usual arguments of the generative school in favor of the hypothesis that some aspects of human language structure are not learned from exposure to data, and further argues that some of what is innate must be language-specific, while some must be due to general properties of the mind (1987a:86-90). These arguments are well-known to linguists, so I need not rehearse them here. However, I will note that Jackendoff makes the logical extension of the innateness hypothesis to the other modules he believes are in the computational mind; certain aspects of each of them will be innate, and certain of the innate aspects will be property-specific (1987a:268-70). As demonstrated in particular by his 1983 and 1990 books, Jackendoff is firmly committed to investigating innateness; this is one of the major differences between him and cognitive-stratificational linguists.

Comparison of Theories. The statements below characterize a highly specific view of language:

1) Language is a bidirectional system of structures in the individual human's mind which links concepts with motor activity and auditory perception. 2) There are levels of structure in language, including at least phonology and syntax, which have their own independent structural characteristics but which are connected to each other. 3) There is a separate conceptual level with its own structural patterns, connecting downward not only to syntax but also to all manner of other cognitive systems. 4) These cognitive systems are structured in terms of autonomous, interrelated levels in the same way as the language faculty. Like the language faculty, they connect at the bottom to perceptive or motor structures of the body. 5) The mind is an abstraction of the brain, which means that ultimately, language and other cognitive faculties are encoded in the neurological patterns of the brain. It is therefore the patterns themselves which are important--the neurological patterns do not relate items, but are themselves the cognitive substance.

These statements are some of the most fundamental ideas of cognitive-stratificational linguistics, especially as developed by Lamb during the 1980's. As we have seen, they are also fundamental to Jackendoff's cognitive linguistics. We could add more--the idea that there are no boundaries, no concepts in the world, but only in the mind; the recognition of the differences between computers and brains, and the shared beliefs about the nature of neurological and hence linguistic processing; and the rejection of an autonomous lexical component. A complete list of

correspondences would be more extensive still.

This is not to deny that there are differences, two of which, innateness and the utility of network structures, are discussed above. Another obvious area of difference lies in the description of the structures of a level. This difference is partly an outgrowth of the fact the difference in approach to the structure/process distinction. Since Jackendoff is outlining a structural model separate from processing, he feels free to use whatever device is most convenient to describe the structures of a level. In his opinion, a generative phonology, syntax, or semantics, with formation rules describing underlying structures and derivational rules acting upon underlying structures to produce surface structures, is the most economical system for detailing the possible surface structures of a level. Such a generative system is a purely descriptive device, although Jackendoff leaves open the possibility that something similar might be somehow part of cognitive systems. On the other hand, stratificationalism has argued that descriptive systems of this type, which make use of process statements, are inherently pernicious. It is a point of principle in stratificational linguistics that the best way to describe surface structures of a level is by simply describing them, not inventing a supposed underlying structure for convenience's sake. It is in the details of his generative descriptions of phonology, syntax, and semantics that Jackendoff's work is most dissimilar from stratificational grammar, and most similar to the work of other generativists (e.g., he uses X-bar theory in syntax [1987a:71]).

Conclusions. The differences between Jackendoff's and stratificational theories are mostly in descriptive areas and do not obscure their wide-ranging agreement on more fundamental issues of the nature of language and the nature of the mind. It is interesting is that these theories were developed independently of each other; comparing linguistics to experimental sciences, we might view this as a demonstration of the reproducibility of results.

Like all self-described cognitive linguists, Jackendoff is interested not only in language, but also in the human mind. Language, for all its seeming complexity, is more amenable to analysis than other cognitive structures, so that investigating language is one of the best ways of investigating the mind. Jackendoff's work is at once sufficiently similar to the work of cognitive-stratificationalists to be relatable to theirs, and sufficiently different to make such relating worthwhile. We may hope that in the future cognitive linguists of all schools will be aware of and stimulated by each other's investigations.

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REFERENCES

- Hockett, Charles F. (1948). A Note on 'Structure'. *International Journal of American Linguistics* 14.269-71.
- Jackendoff, Ray (1972). *Semantic Interpretation in Generative Grammar*. Cambridge, MA: The MIT Press.
- (1976). Toward an Explanatory Semantic Representation. *Linguistic Inquiry* 7.89-150.
- (1977). *X-Syntax: A Study of Phrase Structure Grammar*. Cambridge, MA: The MIT Press.
- (1978). Grammar as Evidence for Conceptual Structure. In Halle, Bresnan, and Miller (eds.), *Linguistic Theory and Psychological Reality*. Cambridge, MA: The MIT Press, 201-228.
- (1983). *Semantics and Cognition*. Cambridge, MA: The MIT Press.
- (1985). Information is in the Mind of the Beholder. *Linguistics and Philosophy* 8.23-33.
- (1987a). *Consciousness and the Computational Mind*. Cambridge, MA: The MIT Press.
- (1987b). The Status of Thematic Relations in Linguistic Theory. *Linguistic Inquiry* 18.369-411.
- (1989). What is a Concept, that a Person May Grasp It? *Mind and Language* 4.68-102.
- (1990). *Semantic Structures*. Cambridge, MA: The MIT Press.
- Lerdahl, Fred, and Ray Jackendoff (1983). *A Generative Theory of Tonal Music*. Cambridge, MA: The MIT Press.

METATHEORY

RELATIVITY IN LINGUISTICS

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In Saussure's day, the big questions had to do with language change. But the comparative school up through Müller, Curtius and Schleicher "did not," as Saussure tells us (1916:16; 1959:3), "succeed in setting up the true science of linguistics. It failed to seek out the nature of its object of study." The neogrammarians in the latter half of the nineteenth century placed "the results of comparative studies in their historical perspective" (p.18-19; p.5) and linked "the facts in their natural order." They took a step forward in that language was "no longer looked upon as an organism that develops independently but as a product of the collective mind of linguistic groups." But the question remained: What was it that changed? What was the nature of language? Saussure answered with his concept of *langue*.

Saussure's view of language (*langue*)

Saussure's concept of *langue*, like other concepts of language before and since, had its roots in ancient Greece in the Aristotelian and Stoic semiotic theory of knowledge—how we know the truth about the world and how we say it. That theory was a triadic theory of signs that was to become extremely influential in philosophy right down to the present. In that theory, the things in the real world were related through levels of sensation and perception to *lekton*, the logical deep structure of true and false propositions. This logical deep structure was the signified that was related through syntactic and phonotactic levels to the signifier, the sound of the voice. Normative grammar was then built on this relation of signifier to signified. These ancient views were then carried down to the present day in normative grammar and in the philosophical theory of knowledge.

In Saussure's view, linguistics would "turn back to the static viewpoint of traditional grammar but with a new spirit and with other procedures" (p.119; p.82-3). He reconceived the relation of signifier to signified as a sign relation between a sound image and a concept, which he supposed to be psychologically real, but perfect only in a collectivity. Thus he retained, perhaps unwittingly, the ancient assumptions of a norm of grammatical uniformity and a norm of logical perfection.

To Saussure, language was "a system of independent terms in which the value of each term results solely from the simultaneous presence of the others" (p.159; p.114). Thus linguistic value was taken relative to the context of the whole linguistic system, a rather limited static view of relativity to a context.

Saussure and language change

Saussure modeled language change as diachronic change from one synchronic language state to another. Linguistic changes affect only isolated elements, but like moves in chess, the change of one element has a repercussion on the whole system. Furthermore, and this is important, as in chess, any particular synchronic state of language is free of all antecedent positions; the route in arriving there makes absolutely no difference. This illustrates his point that linguistic research should always maintain a distinction between synchrony and diachrony (p.117; p.81).

Thus relativity entered again in Saussure's thought, here in a dynamic rather than a static way. Each diachronic change of state of the system is relative to the change of one element and to the previous state.

State theories have been widely used for centuries to model the natural world in the physical and biological sciences. They make use of a concept of system defined to encompass in theory the scope of the relevant phenomena under study. Such state systems serve as theoretical representations of selected parts of the physical reality and how they change. Proposed hypotheses and laws are then subject to test against the physical reality by observation and experiment. Dynamic state theories in science share the characteristic, noted by Saussure in his chess analogy, that changes depend on the current state and on the laws of change, and are independent of the path taken to the current state.

Saussure's application of state theory to language change may well have been suggested by earlier attempts to see language as an organism with a life of its own like the other organisms of nature, animal, vegetable, and mineral. That view was open to ontological objections and Saussure rejected it. But he still supposed language to have psychological reality and he consciously modeled language on traditional semiotic and grammatical theory. Thus his view was also open to ontological objections.

Saussure's view of speaking (*parole*)

A proper understanding of speaking requires a proper understanding of speakers and also of hearers. No adequate theory of speakers was available to Saussure and he did not develop one. He proposed instead a concept of *parole* (speaking). He did not use a state theory for speakers or hearers as he might have because his concept of language, which grew out of grammar, led only to the idea of a static code being "used" by the speaker.

Saussure's assumption that speakers "use" a code resembling traditional grammar is an unexamined assumption frequently made even today. Perhaps it came from the image of a student using a Latin grammar book and dictionary as he laboriously tries to express his thought in Latin. It does not follow that people speaking their native language similarly use an internal grammar and lexicon.

Saussure said that when a person talks, the idea he wishes to express evokes a whole latent system that makes possible the oppositions necessary for the formation of the sign, oppositions, for example, to other members of an inflectional paradigm and to other words sharing the same paradigmatic inflection (p.179; p.130). Speakers were supposed to take into account as they

speak all the oppositions offered by the whole language to what they could say but do not. Then they were supposed to eliminate mentally as they speak everything that does not help to bring out the desired differentiation.

On the face of it, it seems absurd that whenever we utter a verb form, similar forms of all the other verbs in the language that we don't wish to express are evoked and mentally eliminated. There is no theory of how people do these things except that the speaker "uses" the language. This is no theory at all without fleshing out what is meant by "using." The assumed relativity to the whole language offers no way to take into account the many contextual, situational, and social factors that constrain what a speaker says. And there remains a cognitive dissonance between language and the "user." A theory of the code is not a theory of speakers.

Speaking and understanding in human linguistics

Human linguistics contains a theory of speaking and understanding that has many affiliations with Saussure's thought. But it changes its focus from langue not to parole but to the people themselves who speak and understand (Yngve 1986). It uses not Saussure's concept of system modeling grammar but the standard concept of a dynamic state system modeling an aspect of physical reality as found in the more highly developed sciences (Yngve 1985).

People who communicate are modeled as systems called *communicating individuals* having state properties that model the linguistic properties of real people. These systems, being theories of a physical reality, can be tested against that physical reality by observation and experiment as is normally done in the physical and biological sciences.

In this theory, what a person says or does is relative not to langue, but to a context which exists in the state of the person's linguistic properties. The doing or saying changes the state and thus changes the context for future communicative acts, and this change in state also represents the speaker's understanding of what has been said or done.

What a listener understands is relative not to langue but to a context which exists in the state of the linguistic properties of the listener. The incoming sound energy or other signal acts to change the state of the listener. The changed properties of the listener then represent a changed context with respect to which other signals are understood. The change in the state properties of the listener is the listener's understanding. Thus the listener's understanding may well be different from that of the speaker and we can model misunderstanding as well as understanding.

This theory has little resemblance to Saussure's view of speakers "using" a static code when they speak, being closer to his view of diachronic change. It does not suffer, however from the ontological problems associated with concepts of language.

The treatment of groups in human linguistics

When we change our focus from langue to people, a scientifically justified treatment of groups becomes possible. People do not usually speak and under-

stand by themselves, but in groups of two or more. We also need to consider the energy of the sound waves, light, or other energy involved in communicative interactions and the physical environment to the extent that it may affect the interaction. So we set up systems called *linkages* that represent groups of communicating individuals, the sound or other energy, and the relevant aspects of the environment.

In setting up linkages in addition to communicating individuals we have systems at both the social level and the individual level. It now becomes possible also to model in theory the relation of the person to the group and of the group to the persons making it up, something that is impossible with only a concept of langue that has been pressed to do double duty as both individual and social.

A separate treatment of groups allows an improved treatment of linguistic variation. We no longer have to combat the traditional assumptions of uniformity associated with concepts of a language for we have the possibility of representing the complex structure of groups in terms of many individuals differing in their properties. We can also represent groups of groups that overlap each other in complex ways.

Then we can represent learning how to communicate as changes in the linguistic properties of the individuals. And since we also have linkages, learning how to communicate can be treated naturally as taking place within the context of its social matrix.

This leads the way to a more realistic formal treatment of linguistic change, which we now see as changes in the complex properties of groups. After all, it is the *people* that change, not some nebulous abstraction called language.

The variety of relativity in human linguistics

Now to summarize. Whereas theories following Saussure exhibit relativity, both in diachronic change and in speaking, only with respect to the synchronic state of a whole language, relativity figures in many ways in a human linguistics.

First, in speaking, what a person says or does communicatively is relative not to the whole language but to a context represented in the changing state of the individual. What one says or does then changes the state so that further communicative activity is relative to a changed context. The changes in the state of the individual then constitutes the individual's own understanding of what he or she said.

Second, what a person understands in listening is also relative not to the whole language but to a context represented in the changing state of the individual. The incoming speech or other energy changes the state of the individual, and this change in the state of the individual constitutes the individual's understanding. The changed state then represents the changed context relative to which further signals are understood.

Third, during a conversation between two or more people, the state of the linkage represents the context and state of understanding of the group. How the linkage changes as a result of the communicative interactions is then relative to the changing state of the linkage.

Fourth, when a child learns to talk or to communicate in other ways, we

see this not as acquiring language but as a change in the more permanent aspects of the state of the individual. These changes are relative to the present state of the individual, which includes what the child has already mastered and also the internal representation of the social and situational context of learning within the group.

Fifth, when a group learns to cooperate in some task, we see the learning as changes in linguistic or communicative properties of the linkage representing the group. These changes are relative to the changing state of the linkage, and thus to the group and to the task.

Sixth, we are not pressured by the tradition to see variation in terms of different languages, dialects, or idiolects. We see the properties of various individuals as varying relative to the properties of others, where each individual can differ in one or more properties.

Seventh, We can also represent variation at the group level as relative to the varying properties of linkages overlapping in many ways.

And eighth, in studying historical change, we see the changes as relative to the complex properties of the overlapping linkages understood in studies of variation.

Linguistics up to the present has not succeeded in setting up the true science of linguistics. It has failed to seek out the nature of its object of study. Once we accept real people from the point of view of how they communicate as our objects of study, we can cast off the dead weight of the semiotic-grammatical tradition. We can then seek out the nature of our objects of study in a true linguistic science worthy of taking its rightful place alongside the more highly developed physical and biological sciences.

References

- Saussure, Ferdinand de. 1916. *Cours de linguistique générale publié par Charles Bally et Albert Sechehaye avec la collaboration de Albert Riedlinger*. Lausanne and Paris: Payot.
- Saussure, Ferdinand de. 1959. *Course in General Linguistics*. trans. by Wade Baskin. New York, Toronto, London: McGraw Hill.
- Yngve, Victor H. 1985. Concepts of system in science and in linguistics. In *The eleventh LACUS Forum 1984* ed. Robert A. Hall, Jr., 63-70. Columbia, South Carolina: Hornbeam Press.
- Yngve, Victor H. 1986. *Linguistics As a Science*. Bloomington and Indianapolis: Indiana University Press.

A LINGUIST'S COMPROMISE BETWEEN SCIENTIFIC OBJECTIVITY AND FULL PARTICIPATION IN A SPEECH-COMMUNITY

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I am among those members of LACUS who have closely followed the arguments back and forth between our esteemed friend Victor Yngve and others, in his circular *Communications of the Workshop for Scientific Linguistics*. The matters I wish to discuss may be too lengthy for a contribution to that circular; on the other hand, they ought to be of broad and general interest to the linguistic profession. I have been stimulated to reconsider the intellectual basis for linguistic research, with two questions at the forefront:

- (1) Can a linguist, or should a linguist, observe the operation of languages purely as an observer, not involved in the communicative network that links speakers and listeners, writers and readers?
- (2) What intellectual good or harm comes from the analytical terminology that linguists apply to the objects of their study?

I take for granted that no linguists want to **misunderstand** anything they are investigating. Our motive is to understand it for what it is. Whenever we disagree about it, we aim at a clarification that advances us beyond the commonplace that "Opinions differ" or "Tastes differ." Any statement that professional persons make needs to be warranted by the facts. If one of them has been looking at some facts and another at quite different facts, then the encounter ought to lead them to a wider understanding. This would amount to a genuinely scientific exchange.

I

The facts of language are only secondarily what the linguist **observes**; they are primarily what the speaker or writer **communicates**, and such communication is no simple matter. Even if the speaker or writer is of one mind (so to speak) and has just one message to convey, others may often vary in what they make of it, or how much of it registers upon them. Moreover, the nature of every language, whether native or foreign, is such that all of us, including the would-be scientific observer, depend upon having been **introduced** to it by one or more who are already skilled in the language. Nobody acquires valid knowledge of a language by treating it as an unknown that can be explored by the methodical exercise of pure intelligence.

Even in the extreme case of deciphering the texts written in an extinct, forgotten language, the men of genius have had to draw upon some kind of indirect contact with known languages. For the first successful decipherment, Champollion made headway with the Egyptian hieroglyphs by means of the accompanying Greek text (as far as it went) and then by bringing in the resources of Coptic, which is a later stage of the Egyptian language, still used in the liturgy and well understood by Christian priests

and monks, especially in upper Egypt. But many details of ancient Egyptian remain obscure, for lack of any definite clue. The perplexities are much more extensive in Elamite, because it died out with no known relatives. Although the Elamite script itself was in large part deciphered after the Old Persian and the Babylonian (or Akkadian) on the great trilingual inscription of Behistun, still the Elamite language — written on thousands of monoglot tablets — resists and discourages the efforts of disciplined researchers to make sense of them. Conjecture takes on an inordinately large role in the interpretation of Elamite texts, and real progress is slow.

Conjecture, however, figures in the acquisition of any language; for a genuinely full introduction or explanation is never practical. We often guess at the meaning of a word in our native tongue, subject to later corroboration or correction; and in a foreign language we do it still more. A guess based upon the context is not wild; yet it is liable to go wrong, and it needs to be confirmed by an authoritative person or — failing that — by unambiguous experience afterwards.

Since language is very much a human activity or process, the truth about language is unlike the truth about ocean currents or planetary motions or photosynthesis. The linguist cannot avoid being part of what he is studying. Even when his stance is that of a disinterested observer, the language would be lost on him if he were not following it almost as an interested participant does. When it is a foreign language which he has learned thoroughly or imperfectly, he must in any case try to be like those who have been speaking it all their lives. What the components of a language **mean** to the people using them is at the heart of linguistic investigations.

Now phonetics may constitute a major exception. The sounds can indeed be observed as physical phenomena, and the production of them by the human body can be analyzed physiologically, applying the methods appropriate to the study of animal sounds. For speech is a bodily process, no less than chewing or urinating. Yet here too, as soon as you get into varying pronunciations, it becomes relevant to determine whether these affect the message, and how they do; a linguist cannot afford to disregard their impact upon communication.

Whenever we study what is **conveyed** through language, should we aim at the same objectivity as when we study the conveyance — i.e. the actual sounds (or, for that matter, the written letters in non-oral communication)? I maintain that any such attempt at **objectivity** is chimerical and self-defeating, but that fair-mindedness or judicious impartiality befits a linguist as either a member of society in good standing or a recognised outsider. My point is not to belabor a fine distinction between objectivity and impartiality, but to insist upon the linguist's true position: needing to understand, as comprehensively as possible, the people who use the language — what they are up to, their feelings and biases no less than their reasons. If he could somehow be above all this himself, he would not then be better qualified to give a full, insightful account of their behavior.

A comparison to medical science may be pertinent. A physician ought surely to proceed on the basis of observable facts, using a thermometer, a stethoscope, etc.; but that does not exclude attention — sympathetic attention — to the patient's complaints. They sometimes remind the physician of what he himself once suffered, apart from anything he was taught in medical school. Personal communication between doctor and patient is indispensable in the practice of medicine. If some symptoms reported by the patient are dismissed for lack of physical evidence to corroborate them, the diagnosis will be unreliable. Such factors make medicine, perhaps, an art rather than a science. Its very purpose is to restore the patient's health, as much as possible; a balanced, scientific approach is most conducive to that end.

Now the linguist's position differs from the physician's. Although linguistics was, historically, an outgrowth of the **teaching** of languages (a circumstance that I will dwell upon later), for my present argument it is necessary to liken the linguist to a curious by-stander or on-looker, or even an eaves-dropper, paying attention to others who are engaged in speech. He is uninvolved, in the sense that whatever they may say, he does not stand to gain or lose personally, aside from the passive enlargement of his experience. And whereas they are engrossed in the intellectual or emotional substance of what is said, he need not care about that at all; instead, he may be intrigued merely by **how** they are putting it.

Linguists have a social role, if only a small, marginal one. Here I am not talking about polyglots skilled in translation or in escorting visitors from abroad, but about linguistic theorists. The world shows embarrassingly little need for us, in comparison with other experts such as whale-watchers or seismologists. That is because a language, in each community, functions without authoritative individuals, by and large; for everyone learns from everyone else, more or less (cf. Plato, *Protagoras* 327e-328a). And as in the rest of the social sciences (so-called), it behooves us to demonstrate what benefit, if any, redounds to the community from our expertise. Supposing that we have succeeded, or shall hereafter succeed, in describing the **system of language** by which the community actually though unwittingly operates, nobody will live longer or better as a result, nor will the English language or any other be changed.

Yet the very fullness, pervasiveness, and complexity of language invites a certain type of intellect to study it. Inasmuch as the study is harmless, let it be encouraged, and let each one contribute whatever he or she can. Whether or not we claim to do it scientifically, we have a clear moral duty to be on the alert against falsehood — either outright lies or subtle distortions — with which the use of language abounds. Not that we envisage ourselves as morally superior to others; rather we, being human, are able to enter into another person's sentiments to the extent of understanding them, however offensive or outrageous.

At this stage of my argument, a protest or a caution is in order about the term "information", as used by some linguists to homogenize the content of speech. Now for the purpose of syntactical analysis *You're*

crazy seems quite parallel to *You're feverish*; but pragmatically they are far apart, although sharing a bit of common ground — that something is wrong with you. A well-disposed person says *You're feverish*, and it constitutes information in the quite ordinary sense — helpful information at that. On the other hand, *You're crazy* conveys, instead of literal information, something like this: 'I altogether disagree with your thinking; and besides, I have no regard for you.' Many utterances are little more than the venting of the speaker's anger, or some other strong emotion; many are mere formulas that come to mind, or to the lips, on such-and-such an occasion. For all that, they do not forfeit the interest that we linguists take in any and every manifestation of language, but we must appreciate them for what they are, not just for their surface meaning.

II

For us in linguistics accurate terminology is particularly problematical, because it is language to deal with language. The natural usage of every speech-community treats nearly all the items of vocabulary somewhat flexibly, and at times capriciously, as the moods and needs of communication vary from moment to moment. Talking one to one, the speakers, if not immediately understood, can say as much as necessary to explain themselves. But when addressing miscellaneous people, and even more when writing for unknown readers, we feel the need for standardized, unmistakable expressions; these are not arrived at easily.

In the social sciences, including psychology, the professionals have to talk about people, but they attempt to so define or pin down certain words that the discourse will be quite unambiguous, at least among the professionals themselves. Yet they do not achieve the degree of uniformity that prevails in the physical sciences. Now linguistic terminology, except perhaps in the field of phonetics, falls short of the desired clarity; what A intended by the choice of such-and-such a word is understood differently by B, or quite misunderstood, or it leaves B baffled. The confusions are to a large extent rooted in the long history of language study, and cannot be promptly obviated.

While I would not despair of an eventual remedy for them, in my opinion the linguistic profession needs to grasp the principle that the terms — one and all — are merely **ancillary** to our main purpose, which is to improve in every way our understanding of languages, the relations between them, and particularly the differences. To acquire just a practical command of your native tongue, of course you need not master any particular technical vocabulary, including that of grammar or linguistics. If you have picked up, through frequent exposure, some items such as *sentence* or *syllable* or *interrogative*, you are not thereby bound to grasp their precise meaning, any more than that of *regiment* or *appellate* or *piston* or *ozone* or *kilocycle*; you can get along with understanding them vaguely.

One item of vocabulary, *word* itself, illustrates how the problems of linguistics are bound up with the long and varied history of people com-

municating, especially in written form. The linguists endlessly disagree whether or not *word* can be used as an exact, uniform term in their investigations; but laymen understand it well enough, provided they are literate. The equivalents of 'word' in the various languages go back to pre-historic times, when there was no writing; but once writing became a common skill, *word* took on a more definite sense as the unit consisting of a set string of letters. Rules were gradually established for the demarcation of words in each language, in accord partly with its own phonology but partly with the model supplied by another, more prestigious language; Latin was the most influential in this regard. But the spoken counterparts of the written words have remained much more fluid, and since the nineteenth century they have challenged the ingenuity of the linguistic profession to perfect a scientific, analytical notation representing what they really are. The International Phonetic Alphabet, in its successive varieties, testifies to the acumen and the progressive outlook of its creators, but also to their inescapable links with past experience.

For a **theoretical**, as distinct from a practical, understanding of a single language, a set of terms is necessary; but why should one take the trouble to learn them, as they deal with the language that one has already mastered? When grammar was just beginning in Greece, in the fifth century B.C., the comic character Strepsiades asked this very question (Aristophanes, *Clouds* 693), "But why am I learning this stuff that we all know?" The value of grammar that did gradually gain for it an important place in Greek schools was as an **aid to rhetoric**.¹ For the Greeks perceived something that modern linguistics often disregards: how few native speakers of a language are good at making speeches. In order to hold the attention of an audience and win it over to one side, superior skill made an enormous difference; and grammar, being elevated from mere literacy to a systematic and fairly thorough analysis of the Greek language, helped in the drafting and revision of any speech. Among the requirements of public speaking was adherence to the **standard** language, avoiding any hint of a dialect or any barbarism — i.e. a confusion that betrayed a foreign origin.

Grammar, for all its dry and tedious minutiae, proved its worth in classroom experience, by training capable writers. But a greater challenge came when the horizon of education was broadened to take in more than just one established language. Here I must forbear to discuss the adaptation of grammar to the Latin language in classical antiquity, and the appreciable but still limited progress in grammatical technique, due to several centuries of bilingualism between Greek and Latin in a highly cultured population.

As for the role of linguistics in the modern intellectual world, complex terminology is most important as a sort of international banking: If

¹ See my article, "The Origin of Grammar in Sophistry," *General Linguistics*, 23 (1983), 41-47.

we have apt grammatical terms, they enable us to switch from one language — one people's system — to another, with a minimum of loss or error. Each language is replete with peculiarities; we need to be alerted to them. And languages cannot be reformed as the British currency was recently, by abolishing the guinea and the shilling because they interfered with the simple division of the pound into a hundred parts, like other straightforward currencies.

The best grammars are contrastive, either explicitly or at least implicitly so;² they tell what an Anglophone student must **focus upon** in French, or in Spanish, or in whatever other language. At the same time, they can afford to be more summary in their treatment of anything that the Anglophone will take in stride; after all, a truly full description of a language would have to be unbearably bulky. Yet the final goal, however distant, in the study of a second language is to become thoroughly bilingual, going back and forth with ease while sensing every equivalence and difference. For any one language blurs or ignores some real things that are clearly distinguished in another; a good bilingual, by virtue of two-fold experience and mental alertness, becomes aware of such clashes and handles them judiciously.

That is a fine achievement — the masterly juxtaposition of two languages, set forth methodically in one of them for the enlightenment of whoever knows that one already but not the other. Yet it will not quite satisfy us as theoretical linguists; we crave something more universal. We would like somehow to surmount the limitation of still basing our linguistic statements upon a point of reference in a particular language that we just happen to know well. Half of our linguistic experience warns us that it is overweening and chimerical to envisage ourselves rising above our native ground and floating on air impartially across national boundaries. But half of that same experience persuades us, to the contrary, that there is no absolute impediment. Just as it is not impossible, on the phonetic side, even for an adult to overcome by great effort the accent that he imposes by second nature upon any new language, so a linguist should in principle be able to put aside all that interferes with perceiving each and every language exactly as it is — and not only the sounds in their physical aspect, but the entire network of communication.

That is what science calls for. Scientists do not claim, however, to **replicate** everything in the world that they observe. A zoologist, no matter how expert in the reproduction of birds, never attempts to produce an eggshell artificially, let alone a chick developing inside it. So a scientific linguist, after analyzing a language voluminously, might disclaim the power to create new and valid specimens of it. But my intuition rejects this paradox; for to know a language is to be able to use it, actively as

² Here I am thinking of some actual books, such as Paul Joüon's *Grammaire de l'hébreu biblique* (Rome: Institut Biblique Pontifical, 1923), not a theorist's postulate for some grammar that has yet to be written.

well as passively — or almost as well. Although nowadays the languages of the past are studied with little attention to composing in them, even so there is no surer proof of mastery than if you can restore a badly damaged text to the satisfaction of other scholars or expose a skillful forgery. Your knowledge allows you to monitor, as it were, an ancient scribe or stone-cutter making the letters; if he got any of them wrong, you could correct him across the centuries.

Correcting mistakes used to be a major concern of grammar, if not of linguistics; and the technical terms got their main work-out in explaining to students that such-and-such a *noun* is *plural*, not *singular*, or that this *vowel* never comes after another vowel in the same *syllable*, or that here the *subject* and the *verb* have to be *inverted*. Trivial though it sounds, such things are central to us as long as it is our profession to deal with language as language — down to earth — even while recognising that at times it is through language that our thoughts soar to realms unknown. In linguistics we cannot afford to **misapprehend** any details, lest they undermine our generalizations.³

Now precision seems to be a very objective goal, closely identified with scientific research; but linguistics, as I see it, comes down to **intimacy**, knowing the details from the inside (so to speak). The linguist, while reaching beyond his mother tongue, ought to be as certain of his statements about other languages as though they were no longer foreign to him — at least in regard to the points that he is establishing. No one person can know very many languages with equal thoroughness; sound judgement consists in being aware of when you are on firm ground and when you are not, so as to say with Socrates, "What I don't know, I don't think I know" (Plato, *Apology* 21d).

The broader a linguist's knowledge, the more he can draw upon pertinent parallels or divergences and arrive at valid conclusions. But a risk of misapprehension enters, the moment he relies on someone else's information that he cannot vouch for personally — when he cites, for example, the placement of verb and object in Armenian, or Yoruba, or Guaraní, without the assurance that comes from having found it to be so in his own study of such-and-such a language.

³ The great Jerzy Kurylowicz became almost notorious for his ill-chosen examples, such as the Spanish participle *escribido* 'written' (really *escrito*). Yakov Malkiel has called this slip to my attention; see also my review of *Studies in Semitic Grammar and Metrics*, in *GL*, 18 (1978), 115, note 12.

Apart from mistakes of foreigners (including illustrious ones), those made by natives have attracted the notice of modern linguists, who show how they fall into recurrent patterns and may exhibit certain trends destined to prevail in the language eventually. See Henri Frei, *La grammaire des fautes* (Paris: P. Geuthner, 1929).

The most ambitious and comprehensive undertakings rest, in the largest part, upon compiled and often homogenized data from numerous and disparate sources of varying quality. It may be argued that the conclusions are not thereby invalidated, because the researcher has reckoned upon the shortcomings of some sources or has even factored them in mathematically, like a percentage of error in a public-opinion poll. I am skeptical, however, about far-reaching correlations that deal with the sequence of noun and attributive adjective, or the position of a negative, as though these terms stood for identifiable and comparable realities in hundreds or thousands of languages all over the world. They are convenient at least as **labels** for keeping track of the diverse phenomena; to claim more for them than that is premature.

III

It has never been demonstrated that collected information about languages can serve a researcher ignorant of them, except as a **supplement** to those languages which he really knows. Linguistics in this century is less scientific than biology in the eighteenth, when Linnaeus, sitting at home in Sweden, described and classified many thousands of plants and animals from all over the world, without ever familiarizing himself with them in their own habitat. Of course he left plenty of room for improvement by his successors; but he was already on the right track: For his purpose the specimens and the reports that flowed in to him from field naturalists in many countries were adequate. But what a linguist can do with unfamiliar languages is much more limited.

For example, while I know neither Hungarian nor Finnish nor any of their scattered relatives to the east, I can undoubtedly rely on the well-established cognates between them, such as Hungarian *vaj* : Finnish *voi* 'butter', or Hungarian *három* : Finnish *kolme* : Mordvin *kolmo* 'three'.⁴ Yet I would not trust myself to pick out anything in a Hungarian text for citation, nor to do the simplest parsing of a Finnish sentence. Now two or three individuals collaborating will safely tap each other's languages; however, teamwork on a larger scale has yet to work effectively, in the sense of **sharing** the linguistic expertise of many persons. The etymological remarks on the words in a big dictionary can indeed be farmed out to miscellaneous scholars, specializing in various languages, because their contributions amount to thousands of separate items, with occasional cross-references. But linguistics has not developed the sort of **composite authority** that reigns supreme in many of the sciences and sometimes gets scandalously abused; the public then learns to its dismay that the claims promoting a new medicine or test were approved through some procedural technicality, before being substantially validated.

⁴ Björn Collinder, *Comparative Grammar of the Uralic Languages* (Stockholm: Almqvist & Wiksell, 1960), pp. 50, 113-114.

To illustrate how our profession is still dependent upon an individual's attainments, let me mention the strongest area of comparative linguistics—namely Indo-European. Although it has progressed since the death of Antoine Meillet (in 1936), none of his successors has so nearly grasped the entire field as he did. We might expect someone to come out with a better book than his *Introduction à l'étude comparative des langues indo-européennes* (first published in 1903), but that has not happened, nor is it likely, unless the book were to be essentially an updated reprint, supplementing Meillet on some details and correcting him here and there. The decisive fact is that he knew more of the ancient languages more accurately than anyone else before or since; he wrote separate grammars of Old Persian, Armenian, and several Slavic languages, as well as book-length sketches of the history of Greek and Latin.⁵ He also had a fine, lucid style; that contributes to the successful presentation of any subject.

We linguists, like scientists in general, have access to a huge quantity of information, but we are restricted by the nature of it, functioning as it does in human communication. That carries with it one advantage: Language is never inherently alien, like sub-atomic particles or black holes — too tiny or too distant for the human faculties, which must devise indirect means to make them somehow perceptible. Any language can be learned by any normal person, though it becomes harder and harder with advancing age, and the division of mankind into language communities has determined that those outside a given community grow up ignorant of its language and remain so, unless they make a special effort. To the extent that they do learn, they become participants; even if they participate passively, not entering into dialogue, they are more than mere external observers. The practical and theoretical consequences of that circumstance need to be understood by professional linguists, since it applies not least to themselves.

⁵ *Esquisse d'une grammaire comparée de l'arménien classique* (Vienna: Imprimerie des PP. Mékhitaristes, 1903), *Esquisse d'une histoire de la langue grecque* (Paris: Hachette, 1913), *Grammaire du vieux perse* (Paris: E. Guilmoto, 1915), *Caractères généraux des langues germaniques* (Hachette, 1917), *Grammaire de la langue polonaise* (with Mme H. de Willman-Grabowska; Paris: E. Champion, 1921), *Grammaire de la langue serbo-croate* (with A. Vaillant; 1924), *Le slave commun* (1924), *Aperçu d'une histoire de la langue latine* (Hachette, 1928). From time to time he republished most of these with minor revisions.

DISCOURSE ANALYSIS OF WRITTEN TEXT

DISCOURSE GROUNDING
THE MORPHOSYNTAX OF MANDARIN DIRECT OBJECTS*

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1. INTRODUCTION

Mandarin direct objects are notorious for their resistance to any unified characterization either in terms of word order or by means of morphosyntactic categorization. Without affecting the truth value of its containing sentence, a direct object can be positioned in front of its verb or after it. When immediately preceding the verb, it is usually marked by a particle BA, resulting in a structure commonly known as the BA-construction. When following the verb, it can be represented as an independent form, or it may be incorporated into its verb, in which case it is stripped of its properties as a full-fledged direct object and, indeed, as a canonical noun. The three morphosyntactic forms are exemplified in the following constructions:

(1) VERB-OBJECT STRUCTURE

ta zuotian bu-le liba
he yesterday mend-PFV fence
'He mended a (the) fence yesterday.'

(2) THE BA-CONSTRUCTION

ta zuotian ba liba bu-le
he yesterday BA fence mend-PFV
'He mended the fence yesterday.'

(3) OBJECT-INCORPORATION

ta zuotian bu-liba-le
he yesterday mend-fence-PFV
'He did some fence-mending yesterday.'

While the word order of Mandarin direct objects has generated a great deal of discussion, the categorization problem has largely gone unnoticed, primarily due to a folk conception that Mandarin words are mono-morphemic, there being one written character for every morphemic unit. Notwithstanding, as Li and Thompson (1981) and Chao (1968) have observed, Mandarin grammar in fact permits quite a few word formation processes. For lack of revealing morphology,

*I would like to thank Gary Prideaux and MingMing Pu for their criticisms on earlier versions of this paper.

however, object-incorporation is yet to be established as a word-compounding process.

The argument that forms such as *liba* in (3) have surrendered their independent grammatical status and integrated with their verbs can be made on two accounts. Syntactically, the perfective aspect marker *le* is suffixed not to *bu* 'mend', but to *bu-liba* 'mend-fence'. Given that this grammatical marker can only be attached directly to the verb, the wordhood of sequences such as *bu-liba* is unequivocal. Morphologically, neither the incorporated-object nor the incorporating-verb can individually receive qualification. The coalescence between the two forms accords with the defining feature of object-incorporation characterized by Mithun (1984) and Baker (1988). That object-incorporation exists in Mandarin, thus, allows of no doubt.

The morphosyntactic disparities among the three constructions are usually dismissed in sentence grammars of various theoretical orientations. Indeed, the sentences (1)-(3) do not seem to contrast one another vis-à-vis their propositional content. At the sentence level, therefore, they are often treated as paraphrases of one another, and the three constructions as alternative ways of representing the same propositional content. Given this, further comparisons among the constructions may seem to be both unnecessary and impossible. However, any vigorous study of the language will have to elucidate the morphosyntactic disparities, because it is even counter intuitive that the three constructions coexist just so that the same direct object can be represented in three alternative ways. It is more conceivable, therefore, that "if a language permits a contrast in form to survive, it ought to be for a purpose," for "it is not normal for language to waste its resources" (Bolinger 1979: 19).

There have been attempts to determine the purpose for which Mandarin permits the morphosyntactic contrasts to survive. By appealing to the semantic properties of direct object referents, Li and Thompson (1975) have argued that direct objects hosted in the pre-verbal position are predominantly definite while those in the post-verbal position indefinite. The tenability of this semantic approach can be challenged on two accounts. First, while it is true that pre-verbal objects are generally definite, independent post-verbal ones can also be interpreted as definite, especially when they are qualified with a demonstrative or possessive expression. Secondly, granting an indefinite reading to post-verbal object referents, the definiteness criterion is not responsive to the contrast between (1) and (3). The inadequacy of the semantic approach prompted Sun and Givón (1985) to turn to the discourse functions of the morphosyntactic forms for an answer. The conclusion they have reached from a text study is that direct objects take the pre-verbal position in order to get an emphatic/contrastive interpretation. Although their definition of

"contrastive" begs qualification and their account does not offer any explanation for the contrast between independent and incorporated object referents in the post-verbal position, their approach of relating the morphosyntactic forms of direct objects to their relative discourse saliency has certainly pointed to a promising perspective within which the morphosyntax of Mandarin direct objects can be elucidated.

2. A DISCOURSE GROUNDING STRUCTURE

From a discourse perspective, the purpose for which Mandarin permits the contrasts among the object-containing constructions to survive can first be approximated by considering the type of question each construction may be used to answer. Thus, (1) can be an answer to the question "what did he do yesterday?" (2) may be a response to "what did he do to the fence yesterday?" And (3) is appropriate for "how did he spend yesterday?" Motivated by these questions is a contrastive analysis regarding the relative saliency of the individual identity of the direct object referent. In (2), the object referent is the central concern and, as such, it is highly individuated, conceptually, from its generic background. In contrast, the individual identity of the object referent in (3) is blotted out so as to induce a generic reading to the referent, since the main concern there is some general action, as opposed to inaction. In (1), the individual identity of the object referent does not seem to be particularly salient or trivial and, therefore, there is no need either to bring the referent into prominence or to relegate it to its generic background. It is reasonable to conclude that it is the relative discourse saliency of the direct object referent that conditions the differential use of the three object-representing mechanisms. A unified characterization of Mandarin direct objects, therefore, must be able to account for all three of the morphosyntactic mechanisms with respect to this conditioning factor.

A three-way distinction grounding structure proposed here can provide just this kind of account. Briefly sketched, this structure is formed of three grounding levels, defining three degrees of discourse saliency vis-à-vis object referents. Object referents whose individual identities are salient for the discourse are foregrounded; those whose individual identities are trivial are backgrounded, and the rest are left ground-neutral. The assumption is that it is these three grounding functions that have given rise to the BA-construction, the object-incorporation mechanism and the verb-object structure respectively.

While the relative discourse saliency of a direct object referent conditions the speaker's choice of a specific grounding device, there is no objective criterion by which the speaker decides on the degree of such saliency. Indeed, to what extent an object referent figures in the developing discourse is very much the speaker's subjective construal. Such construals often embody a host of interacting human cognitive

propensities, and the one that directly underlies discourse grounding is the speaker's propensity to manipulate attention in perceiving and conceptualizing discourse entities. Attention, as characterized by Langacker based on the knowledge about human cognitive activities in the auditory domain, "is intrinsically associated with the intensity or energy level of cognitive processes, which translates experientially into greater prominence or salience" (1987: 115). Of course, human beings are capable of manipulating their attention in the opposite fashion as well. In perceiving information, one may choose to allow minimum attention to a certain stimulus, ignoring its specifics and, consequently, conceptualizing that stimulus to be indistinctive from the background. The speaker's cognitive propensity for manipulating attention is therefore the cognitive base of the discourse grounding structure.

Attention manipulation may seem to be a random process on the part of the speaker. In effect, however, this process is both motivated and oriented by the speaker's communicative intentions. In other words, the speaker deploys his/her own attention to, or withholds it from, discourse entities to achieve some discourse effects by which his/her hearers' attention can be manipulated one way or another. It is this functional aspect of the grounding structure that makes empirical tests of the theoretical model viable. Thus, by identifying the discourse effect achieved with each of these three morphosyntactic forms, the speaker's communicative intentions can at least be approximated. In other words, with certain well-defined testing criteria, the coding relations holding between the morphosyntactic mechanisms and the discourse grounding functions can also be empirically determined. The empirical study reported below is an attempt to determine such form-function relations.

3. DISCOURSE ANALYSIS OF NARRATIVES

The general assumption underlying this study is that speakers of Mandarin Chinese make differential uses of the object-containing constructions for the purpose of representing direct object referents of different degrees of construed saliency for various discourse effects. This theoretical assumption is here examined in the context of narrative discourse. The decision on the analytical context is based on the premise that different discourse structures dominate different genres of discourse (cf. Jones and Jones 1979) and that the grounding structure proposed here figures most prominently in narrative discourse, which is characteristically "referential" and "evaluative" (Labov and Waletzky 1967: 13). Theoretical assumption aside, there is also a methodological motivation. According to Labov and Waletzky's (1967) definition, narrative is the technique for recapitulating experience in the form of temporally sequenced events. And

this notion of temporal sequence provides an independent criterion by which the discourse status of direct object referents can be assessed.

3.1. Analytical Criteria

The proposed discourse grounding structure is essentially one of speaker-oriented. A direct object referent is not inherently salient or trivial and, therefore, warrants foregrounding or backgrounding. Rather, its relative saliency in discourse as well as the need to foreground or background it are matters of the speaker's subjective construal. However, because there is no direct access to the speaker's construals, it is necessary to establish some analytical criteria by which speaker-imposed discourse values, as well as the needs to represent such values, can be reliably derived. Of course, for testing a form-function correlation, it is crucially important that the analytical criteria be formulated in terms of neither the form nor the function in question, for, otherwise, a definitional circularity would render the hypothesized correlation non-falsifiable. The two criteria employed here are thus independent both of the discourse grounding functions and of the morphosyntactic forms.

The Sequentiality Criterion. The characterization of narratives necessarily makes reference to *event*. An event is here understood as a proposition in terms of its semantic property, and a clause in terms of its syntactic property. In analyzing narratives, two types of events are generally distinguished: those which are sequenced on a temporal story line, conceivably within an episode, and those which are not so sequenced. As have been correctly observed by Hopper (1979), Hopper and Thompson (1980), it is the in-sequence events that provide the substance of the discourse and hence move the narrative forward, while the out-of-sequence events merely add nonessential information to the discourse and thus do not contribute directly to the development of the story. This being the case, the event affords a valuable diagnostic environment by which the discourse saliency of direct object referents can be independently evaluated.

Given the distinction between the two event types, it is reasonable to define object referents of out-of-sequence events as non-salient and those of in-sequence events as important for the discourse. On the basis of this analysis, a working hypothesis can be formulated that direct objects occurring in clauses coding out-of-sequence events tend to be grammatically backgrounded with the object-incorporation mechanism, and those occurring in clauses which code in-sequence events are foregrounded or maintained ground-neutral by the BA-construction or the verb-object structure respectively. Of course, whereas some object referents of in-sequence events are important only by virtue of the fact that their containing events are in-sequence, others are salient for their own individual identities. However, due

to the binary feature of the Sequentiality Criterion, the best can be said is that direct object referents which occur in in-sequence events, and which are highly marked for their individual identities, are more likely to take the BA-construction.

The Re-mention Criterion. During the process of discourse production, it can be reasonably assumed, the greater saliency is imposed on an entity by the speaker, the more frequently that entity will be attended to. On the premise of this assumption, it may be expected that, within the scope of an episode, foregrounded objects are referred to more frequently than ground-neutral ones which, in turn, are referred to more often than backgrounded ones. It must be pointed out that the relative discourse saliency of an object referent is now evaluated in terms of its individual identity. Unless an object referent is individuated from its generic background, it is not available for further reference. And unless a direct object referent is particularly salient, it will not be highly individuated. Thus, the higher individuation is construed for an object, the more frequently it will be re-mentioned within an episode. Thus, in addition to the discourse value inherited from its containing event, an object referent can be more or less important depending on whether its individual identity is conceptualized. On the basis of this analysis, it can be hypothesized that objects which are construed as particularly important for their individual identities will be re-mentioned more frequently within a given episode. Because the BA-construction foregrounds direct objects by highlighting their individual identities, it is further hypothesized that object referents in the BA-construction enjoy higher frequency of re-mention within an episode than those in the other two constructions.

By way of recapitulation, the two analytical criteria each is expected to separate one grounding specification from the other two. By the Sequentiality Criterion, the backgrounding mechanism should be differentiated from the other two grounding levels. Likewise, by the Re-mention Criterion, the foregrounding mechanism should be singled out. Complementing each other, the two analytical criteria will provide a three-way distinction for the grounding structure.

3.1. Analytical Categories

Direct object as the basic analytical unit. Unlike other studies on discourse grounding (Hopper 1979, Thompson 1987) which take the *event* to be the basic analytical unit, the analysis carried out here proceeds with the *direct object*. The assumption behind the decision is that the discourse status of the direct object, vis-à-vis that of the subject or of the verb, is most susceptible to, and analyzable in terms of, attention allocation. Defined conceptually, a direct object is the patient entity of a transitive event, and an event is transitive if it has

a force-dynamic, unidirectional relation holding between an agent entity and a patient entity. The term "patient entity" is here intended to induce a notion of "affectedness" on the part of the object referent. Thus, direct objects are event entities at which forces are instigated and in which changes take place.

The general hypothesis under test here is that a direct object can occur in any one of the three morphosyntactic forms, and it is only for discourse effects of one kind or another that it opts for one form over the other two. However, when a discourse effect is to be achieved within the sentence that contains the object in question, it is often only one of the forms that is acceptable. For example, when the discourse effect of a maximum affectedness on an object referent is to be overtly expressed with an adverbial within the sentence, the BA-construction is obligatory, while neither of the other two forms are acceptable. There are also morphosyntactic factors warranting one, or two, but not all three of the structures. As a case in point, it is impossible for the experiential aspect marker *guo* or the durative aspect marker (*zheng/zai* to occur in the BA-construction. Similarly, direct object referents in stock expressions reject the BA-construction. For the purpose of determining true discourse conditioning factors, then, the analytical tokens will include only those object referents which are acceptable in all three of the morphosyntactic forms and object referents which can occur in only one or two, but not all three of the constructions will be exempted.

Episode as the analytical scope. Although sequentiality is the defining feature of narratives, not all events in a narrative have to be on the same temporal line. A narrative may be built along several or many temporal lines. Furthermore, events following the same story line also share the same situational context in terms of the spatial location and involved characters. Events which share these three parameters, constitute what is generally recognized as the *episode*. Given this fact about narrative discourse as well as our knowledge about human attention span, it seems plausible to take the episode, rather than the whole narrative, as the immediate scope within which pertinent analysis is made.

3.3. Text Analysis

The database. The study is based on a corpus of 180 episodes from six narratives. These narratives are randomly chosen novels of modern and contemporary times in Mandarin Chinese by both well-established and less well-known writers. Because one of the sample novels contains exactly thirty episodes, it was decided that these thirty episodes and the first thirty episodes from each of the other novels were to constitute the data source sample. Direct objects which were representable, from the sentence perspective, in all three of the

constructions were first separated from those which were acceptable in one or two, but not all three of the constructions. The former type of direct objects, which were eligible for the analysis, were then recorded according to the morphosyntactic forms in which they were originally represented. The selected direct objects were subsequently analyzed by the Sequentiality Criterion, i.e., in terms of whether they occurred in clauses coding in-sequence or out-of-sequence events. The result is presented in Table 1.

	V-O		BA-C		O-I		TOT.
	N	PCT	N	PCT	N	PCT	N
In-Sequence	475	79%	105	88%	32	12%	612
Out-Sequence	128	21%	14	12%	240	88%	382
TOTAL	603	100%	119	100%	272	100%	994

TABLE 1. Sequentiality

The selected objects were also analyzed by the Re-mention Criterion. The frequency of reoccurrences of each token object within its containing episode was tallied. The counts are given in Table 2.

	V-O	BA-C	O-I	TOT.
No. of Obj.	603	119	272	994
Re-mention	417	403	52	872
AVERAGE	0.69	3.39	0.19	0.88

TABLE 2. Re-mention

Test of sequentiality effect. The percentages of object referents of in-sequence events were calculated for each of the six narratives. These percentages, upon an arcsin transformation, were submitted to analysis of variance. A significant difference ($F(2,15)=60.48$, $p<.001$) was found among the group means. In order to gauge better the correlation between the morphosyntactic constructions and the sequentiality factor, pairwise comparisons were carried out with Scheffé's Test. As expected, the O-I type significantly differs ($p<.001$) from each of the other types. However, between the BA-C type and the V-O type, there is no significant difference ($p=.245$). These results accord with the working hypothesis formulated in the discussion of the Sequentiality Criterion. That is, objects in clauses coding out-of-sequence events are predominantly expressed as incorporated forms, while those of in-sequence events tend to be represented in either the BA-construction or the verb-object structure.

Test of re-mention effect. The Re-mention data in Table 2 were also subjected to analysis of variance. A significant difference ($F(2,15)=29.27$, $p<.001$) was observed among the three group means. Scheffé's Test was subsequently performed for pairwise comparisons of means within the interaction between the three morphosyntactic types on the one hand and the re-mention frequency on the other. The BA-C type differs significantly ($p<.001$) from each of the other

types. No distinction could be observed between the V-O and O-I types ($p=.534$). The hypothesis is supported that object referents in the BA-construction enjoy higher frequency of re-mention than do those in the other two constructions within a given narrative episode.

4. CONCLUSION

Although the sequentiality and re-mention criteria each only singles out one form-function relation, together they define all three of such relations. Given an object referent, if it is considered salient enough to be foregrounded, it is usually represented in a clause that codes in-sequence event and it is very frequently referred to in the immediate discourse. In contrast, if it is considered insignificant enough to be backgrounded, it is often represented in a clause coding out-of-sequence event, its individual identity is often obliterated and, consequently, it is not available for further reference. In default of these considerations, it is left ground-neutral, i.e., it is represented in an in-sequence event but its individual identity is often not attended to any further. These three grounding specifications, as the results of the study show, are realized by the BA-construction, the object-incorporation mechanism and the verb-object structure respectively. Below is a representation of the three form-function relations as defined by the two criteria (where "in" and "out" whether the object referent is in an in-sequence event or in an out-of-sequence event; and "high" and "low" indicate high or low frequency of re-mention):

	SEQUENTIAL	RE-MENTION	
BA-C	In	High	FOREGROUND
V-O	In	Low	GR. NEUTRAL
O-I	Out	Low	BACKGROUND

From the results of the empirical study, it can be concluded that Mandarin speakers do regularly make differential uses of the three object-representing constructions to manifest the relative discourse saliency of object referents as they have construed them. Thus, the three constructions exist in the grammar of Mandarin Chinese for the purpose of accommodating the speaker's cognitive propensities and communicative needs.

The discourse grounding structure has been developed under a guiding principle that, of all the factors which condition the use of one morphosyntactic device over all other available "alternatives," it is the speaker that is the determinant. Directly subsumed under this principle is a general conception that language is both cognitive and functional, providing the speaker with "an open-ended set of signs or expressions for their personal or communicative use" (Langacker 1987: 11). Such conception of language and language user invariably

motivates empirical efforts. Indeed, for a grammatical phenomenon, whether or not it can be elucidated formally, there is always the challenge to discover its cognitive and functional underpinnings.

REFERENCES

- Baker, M.C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University Press.
- Bolinger, D.L. 1977. *Meaning and Form*. London: Longmans.
- Chao, Y. 1968. *A Grammar of Spoken Chinese*. Cambridge: At the University Press.
- Hopper, P. 1979. Aspect and foregrounding in discourse. *Discourse and syntax*, ed. by T. Givón. *Syntax and Semantics Vol. 12*. New York: Academic Press.
- , and S.A. Thompson. 1980. Transitivity in discourse. *Language* 56: 251-99.
- Jones, L. and Jones, L. 1979. Multiple levels of information in discourse. *Discourse studies in Mesoamerican Languages: Discussion*. ed. by L. Jones. Texas: Summer Institute if Linguistics and the University of Texas at Arlington.
- Labov, W. and J. Waletzky. 1967. Narrative analysis: oral versions of personal experience. *Essays on the verbal and visual arts*, ed by J. Helm. Seattle: University of Washington Press.
- Langacker, R. 1987. *Functions of cognitive grammar Vol. 1 Theoretical prerequisites*. California: Stanford University Press.
- Li, C.N., and S.A. Thompson. 1975. The semantic function of word order in Chinese. *Word order and word order change*, ed. by C. N. Li, 163-95. Austin: University of Texas Press.
- , 1981. *Mandarin Chinese: A functional Reference Grammar*. Berkeley & Los Angeles: University of California Press.
- Mithun, M. 1984. The evolution of noun incorporation. *Language* 60: 847-94.
- Sun, C., and T. Givón. 1985. On the so Called Work Order in Mandarin Chinese: A Quantified Text Study and its Implications. *Language* 61: 329-51.
- Thompson, S.A. 1987. Subordination and narrative event structure. *Coherence and grounding in discourse*, ed. by Russell Tomlin. Amsterdam: John Benjamins Publishing Company.

EMBEDDING AND SKEWING OF DISCOURSE TYPES

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Classifying texts into particular types or genres--e.g., mystery fiction, biography, sermon, personal anecdote, essay--has a long tradition in literary analysis. The awareness of discourse types is recognized as an important part of teaching composition in one's own language (e.g., Adelstein and Pival 1980) or in a foreign language (e.g., Ventola 1989). In the study of discourse, the identification of the discourse type crucially interacts with the analysis of its internal structures, such as "chunking" the text into narrative schema slots like stage and episodes. Recognizing the discourse type also helps us to understand the use of noun phrases (referring to participants, props, or topics) and verb phrases (especially with regard to the functions of tense, aspect, and modality). For example, while the past or preterite tense-aspect functions in narrative to encode happenings and actions on a timeline, the present or imperfect may report significant information on the mainline of expository discourse. The basic word order, which is vital to language typology, must be discerned relative to discourse typology. Thus, Longacre (1982) shows how normative word order may shift according to discourse type in Biblical Hebrew (e.g., VSO in narrative but SVO in expository) and asserts that it is more useful to compare Florida oranges with California oranges, than with Washington apples.¹

Identification of the discourse type, however, is not a simple matter. Texts are commonly the result of a hierarchical interweaving of different discourse types. Stories have a descriptive section at the stage in which participants are introduced in a certain setting. Scientific writings may embed a narrative section reporting on experimental procedures and their results.

A text may show skewing. What the author intends to be a hortatory text may be expository or narrative in surface structure. It seems rare, however, to have wholesale skewing; more commonly, one type in its overall structure embeds other types of discourse. Once we identify the discourse type of each section or paragraph and figure out how the parts are hierarchically structured in the text, the grammar of each section is better understood in light of its discourse type. And the text as a whole may also be classified as to its type, instead of being a mixture.

This paper briefly discusses some systems of discourse typology and the concepts of embedding and skewing, and then illustrates such embedding and skewing cases with written texts of English. One text, in particular, illustrates how a story is skillfully embedded to make a poignant point in an overall hortatory text.

1. Discourse Typology

In this section I briefly survey some classification systems of discourse types. In their book on composition, Adelstein and Pival (1980) present six parts according to types of writing: (1) the intimate voice: personal writing (e.g., journal, autobiographical narrative, personal essay); (2) the informative voice: descriptive writing (factual description of physical data, "the way it is", presenting information objectively, and personal description of "the way it is to me", conveying an impression); (3) the explanatory voice: expository writing ("classifying, defining, analyzing, exploring, interpreting, and evaluating" (p. 174); (4) the argumentative voice: persuasive writing (presenting arguments and counter arguments, appealing to logical reasoning); (5) the critical voice: writing about literature (regarding character, plot, setting, time, theme, and technique); and (6) the authoritative voice: the research paper.

Since these parts are organized to teach writing, they do not necessarily represent a comprehensive classification of discourse types. While personal writing is part of narrative, there may be narratives that are not personal or autobiographical. The last two, writing about literature and the research paper, do not constitute separate types but belong to the expository type. It is noticeable, however, that they give prominence to descriptive writing,² but not to procedural writing, which they include as a subtype of expository--as a process description of steps in "how-to" types.

Longacre (1983:ch.1) presents a more systematic classification of discourse into four major types (narrative, procedural, behavioral, and expository) with a total of sixteen subtypes, based on the plus or minus values of four parameters: contingent temporal succession, agent orientation, projection, and tension. His scheme uses a matrix and is more systematic than other approaches which list a certain number of types. An exception to these is the presentation of Beekman, Callow, and Kopesec (1981), who recognize four major types of narrative and expository (as nonprescriptive) and procedural and hortatory (as prescriptive). The other parameter, "logical relations presented within a chronological framework," distinguishes narrative and procedural (with a + value), from expository and hortatory (a - value). Later developments of the Beekman et al. model (e.g., Tuggy 1991) adopt schema theory and present six types according to +/-sequentiality and three types of purpose: to affect behavior (procedural and hortatory), to impart ideas (narrative and expository),³ and to affect emotions (descriptive and emotional).

There is a slightly different tradition adopted by German linguists and translation scholars, who distinguish between text type ("Text-typ") and text class ("Textsorte"). Text type is "a functional classification (e.g. informative vs. expressive vs. persuasive texts or descriptive vs. narrative vs. argumentative texts)," and text class is "a category that refers to the occurrence of texts in standard situations (e.g. weather report, prayer, recipe, folk-ballad, operating instructions) and corresponds to the literary category of genre" (Nord 1991:18).

In this paper, I adopt the four basic types posited by Longacre, with the usual projection (P) value--whether the text is projected toward the future and not realized--assigned to each type: i.e., narrative (-P, thus interchangeable with story), procedural (+P), hortatory (+P), and expository (-P). These four types are identical to those presented by Beekman et al. although they use different parameters.

2. Embedding and Skewing

Some hortatory texts have extensive embedding of narrative material which exceed the hortatory material in length. If we were to do a purely quantitative study of some grammatical form of all text material--be it the verb tense or the noun phrase or the subordinated clause--such a study would not normally lead us to a correct identification of the discourse type, nor its results reveal the use of the grammatical form. Recall, for example, that the verb tense-aspect which marks the mainline in one type does not mark the mainline in another type. Any study, whether quantitative or qualitative, should be responsive to the hierarchical structuring of a text within the overall linear presentation. Some units that are part of a hortatory text, for example, may be expository and other units may be narrative or hortatory.

Longacre (1983) points out that both skewing and embedding of discourse types are sensitive to the degree of vividness and specificity-generality. That is, narrative is most vivid, followed by procedural, expository, and hortatory, which is least vivid; while narrative is specific to given participants, procedural is general--applicable to all. Thus, more vivid types tend to embed within a less vivid one, or notional narrative may be cast as procedural to obtain generality.

Regarding parables and fables, he (1983:13) says:

parable and fable are well crystalized and recognizable types in the surface structure because of the very fact that, while casting hortatory material into narrative form, they append a specific moral slot at the end (or in the case of the parable, a clue to the interpretation of the parable).

It is not clear, however, how parable and fable are anything other than narrative, even in notional structure. The deep, real intent of telling such a story may be to teach something, and yet it is still a story, with a plot (which Longacre considers to be notional structure underlying narrative). Besides parables and fables, many narratives, including folktales and contemporary novels, do have a thematic message to get across to the reader. Do we call them all hortatory notionally? I think we need to think about the larger context to resolve the issue here. That is, is the story told to a particular audience with a clear didactic intent? Jesus' parables would become hortatory only when they include the setting and addressees, e.g., disciples or pharisees. Then, the parable is no longer a wholesale skewing of hortatory; it is a narrative embedded in a hortatory text, including the speaker, addressee, and setting in its communication situation.

3. Some Illustrative English Texts

The following text "Shop with Your Eyes Open" by Consumer Reports comes from Reader's Digest (August 1988:130).⁴ Paragraphs are numbered (P1-P7) for ease of reference in discussion.

Example 1

P1 Supermarkets try to coax you to spend more. For example, moving a brand from the bottom shelf to eye level can increase sales by 50 percent. It's no surprise, then, that gourmet foods and other high-profit items are at eye level, while staples sit down low.

P2 To beat supermarkets at their own game, clip coupons, buy in quantity and shop with your wits about you.

P3 We gave an identical shopping list to two staff members, asking one to choose items regardless of cost and the other to look for low prices. Our impulsive shopper wound up with brand-name products costing \$110.05. The careful shopper's cart contained mostly store brands. She spent \$59.35, a saving of \$50.70.

P4 Usually our careful shopper did not have to settle for lower quality. In past tests, many store products (tea bags, peanut butter, preserves, glass cleaner) have done as well as or better than name-brand versions.

P5 Our careful shopper chose the cheapest versions of certain products (aspirin, flour, bleach) that are nearly identical from brand to brand. She avoided high-priced gourmet brands of such items as chicken and ice cream.

P6 Shopping the way our careful staffer did, you would be able to save \$2500 a year buying for a family of four. If you used coupons and shopped for specials, you would save even more.

P7 Sometimes, brand-name items are better quality. Sometimes they're more convenient. Nonetheless, we guarantee you: if you shop with your eyes open, you'll save money.

The first paragraph (P1) gives the general introduction to the text, and its structure is expository with verbs in the present tense. However, the use of the verb **coax** in the very first sentence, which is the thesis sentence of the paragraph, gives a clue that the text might be hortatory. The tone switches abruptly in P2, which consists of a single sentence with three imperatives (**clip**, **buy**, and **shop**), two references to the second person pronoun **you**, and the initial purpose clause (**to beat supermarkets at their own game**). These surface markings are often typical of a procedural type (a "how-to" type text) like a recipe. But we notice that these imperatives are not necessarily sequential, especially **buy** and **shop** may be considered paraphrases of each other. Semantically, we also notice that the text urges us to be a careful shopper, rather than giving a step-by-step procedure of how to shop. Thus, P2 points the text to be hortatory.

It is noteworthy that the procedural and hortatory, which are diametrically opposed in terms of the two main parameters--procedural being -AO (agent orientation) and +CTS (contingent temporal succession), and hortatory +AO and -CTS--may be similar in surface grammatical form. I believe that the + value of the third parameter of projection (+P), although not considered by Longacre as basic as AO and CTS, affects the choice of surface form crucially and the interpretation of *you*, sometimes as -AO (in procedural) and other times as +AO (in hortatory).

The next three paragraphs (P3-5) form an embedded narrative, telling us what happened to two specific staff members--*our impulsive shopper* and *our careful shopper*. There is an agent orientation of two shoppers, with several forms of reference to *the careful shopper*, *she* (twice), and *our careful shopper* (twice). Also notice the mainline verbs in the past in P3: *gave*, *wound up*, *contained*, and *spent*. P4-5 are off the mainline. P4 gives an explanation regarding the quality of the products and brand names. A sentential negation is used (*did not have to settle for lower quality*) in the first sentence to deny a potential expectation from the *script* by the reader (Hwang 1992), an expectation that she must have had to settle for lower quality if she had spent so much less amount of money than the other shopper. The supporting argument for the not-necessarily-positive correlation between the price and the quality is presented next by their past tests results in the following sentence. P5 tells us how the careful shopper chose cheaper but quality products--at least partially expected by now after the information in P4. In P5, although the verbs of the main clauses are in the past (*chose* and *avoided*), the actions are not on the same timeline following those reported in P3 but add further information on the quality of products. All in all, the narrative section comprises half of the whole text.

The last two paragraphs are similar to the tone of P2, with three references to *you* each in P6 and P7, but without any imperative. The use of the modal *would* in the two main clauses of P6 clearly indicates a future-orientation (+projection) of this section, as does the future tense-mode in the very last sentence: *you'll save money*. Conditional margins (*If you used coupons and shopped for specials and if you shop with your eyes open*) are not uncommon in hortatory texts. In fact, the second conditional clause provides the title for this text: "Shop with Your Eyes Open." The first two sentences in P7 are expository in tone using the copula *are*. It seems plausible to consider P6-7 as a notional hortatory cast in expository on surface, illustrating a case of skewing of discourse types. The source of information or authorship is given as "Consumer Reports," which provides the authority, along with references to *we*, *staff members*, *our*, and *our careful staffer*.

The text is analyzed in its schematic structure as follows:⁵

Situation-Problem:	P1 (Expository)
Command:	P2 (Hortatory)
Motivation by Example:	P3-5 (Narrative)
Motivation with Covert Command:	P6-7 (Expository-Hortatory)

This hortatory text illustrates that only a small portion (in fact, a one-sentence paragraph) is a clear-cut hortatory, with extensive embedding of expository and narrative, the former to lay out the situation and support arguments for motivation, and the latter to motivate the reader with a concrete example. Without embedding of these other discourse types, the text would not have been as convincing and persuasive.

The next story appears in "Words to Grow on" by Iron Eyes Cody in *Guideposts* (July 1988:32-33).⁶ Cody first introduces himself as the Indian actor well-known to TV viewers by a single tear rolling down his cheek looking at the polluted waters. Then he says: "now I have another story to tell, an old legend, with a warning as potent as that tear." His story is presented here following the paragraph divisions in the printed text but with sentences numbered for ease of reference.

Example 2

¹Many years ago, Indian youths would go away in solitude to prepare for manhood. ²One such youth hiked into a beautiful valley, green with trees, bright with flowers. ³There he fasted. ⁴But on the third day, as he looked up at the surrounding mountains, he noticed one tall rugged peak, capped with dazzling snow.

⁵I will test myself against that mountain, he thought. ⁶He put on his buffalo-hide shirt, threw his blanket over his shoulders and set off to climb the peak.

⁷When he reached the top he stood on the rim of the world. ⁸He could see forever, and his heart swelled with pride. ⁹Then he heard a rustle at his feet, and looking down he saw a snake. ¹⁰Before he could move, the snake spoke.

¹¹"I am about to die," said the snake. ¹²"It is too cold for me up here and I am freezing. ¹³There is no food and I am starving. ¹⁴Put me under your shirt and take me down to the valley."

¹⁵"No," said the youth. ¹⁶"I am forewarned. ¹⁷I know your kind. ¹⁸You are a rattlesnake. ¹⁹If I pick you up, you will bite, and your bite will kill me."

²⁰"Not so," said the snake. ²¹I will treat you differently. ²²If you do this for me, you will be special. ²³I will not harm you."

²⁴The youth resisted awhile, but this was a very persuasive snake with beautiful markings. ²⁵At last the youth tucked it under his shirt and carried it down to the valley. ²⁶There he laid it gently on the grass, when suddenly the snake coiled, rattled and leapt, biting him on the leg.

²⁷"But you promised--" cried the youth.

²⁸"You knew what I was when you picked me up," said the snake as it slithered away.

To analyze the story roughly, we note that the first three sentences set the stage for the story, and that the new time setting (**on the third day**) in S4 marks the onset of Episode 1. Sentences 4-6 form a Sequence Paragraph, in which each sentence reports a cognitive event (**noticed** and **thought**) or an action (**put on**, **threw**, and **set off**) in a sequence. Episode 2 is a Complex Dialogue Paragraph: S7-8 provide a setting; S9-10 a Lead-in; S11-14 an Initiating Utterance (IU) by the snake, which is notionally a proposal (**take me down to the valley**); S15-19 a Continuing Utterance (CU) by the youth, who is responding to the proposal (**No**) and making a remark (**you will bite**); and finally S20-23 another CU, but this time made by the snake, who is evaluating the youth's remark (**Not so**) and making a new proposal with a remark (**I will treat you differently; you will be special; I will not harm you**).

The climactic Episode 3 states the youth's actions in sequence (S25-26a) and the surprising actions by the snake (S26b). It ends with a Complex Dialogue Paragraph, an exchange between the youth (IU, a remark with an implied question--**why did you bite me?** in S27) and the snake (CU, a counter remark with an implied answer) in S28.

This episode qualifies as the peak (Longacre 1983, 1985), with a number of off-norm features of grammar. First, notice the remarkable S26, whose postposed adverbial subordinate clause has a series of action verbs and a punctual adverb (**when suddenly the snake coiled, rattled and leapt, biting him on the leg**). This is the reverse from the normal coding pattern of mainline action verbs in the main clause and background, setting information in the subordinate clause. Also noticeable is its main clause (**There he laid it gently on the grass**), where the reference to the snake is the pronoun *it*, just as it is in the previous sentence. That is, the pronoun is used to refer to the snake as known information. But when the snake **suddenly** acts biting the youth, contrary to our expectation, it required a noun phrase (**the snake**), a stronger form of reference. What is unexpected, surprising information is reported in the **when**-clause. Certainly, there is a role reversal and an orientation change--as indicated by the switch in the encoding of the subject from **he** (the youth) to **the snake** in S26. In S24-25, there is an elaboration, typical of peak, of the description of the snake (S24) and of the youth's actions (S25). Along with the desperate speech verb **cried**, there is an overall rhetorical underlining to ensure this critical zone of turbulence would not be routine narration (Longacre 1985).

The analysis of this narrative text can be shown as follows in its schematic structure:

Stage:	S1-3
Episode 1:	S4-6
Episode 2:	S7-23
Episode 3 (Peak):	S24-28

The text is clearly a story--told in the past tense except in direct quotations and oriented towards two participants, the youth and the snake. But it is a story with some warning or teaching, although it is never made

explicit. What that teaching is may depend on the larger textual or situational context. It may possibly teach us about a betrayal, to be on guard against some temptation all the time, or to warn us against snakes (to never trust them--as in the Garden of Eden). Once the story is over, however, the author tells us his hortatory intent as follows:

Example 3

²⁹And now, wherever I go, I tell that story. ³⁰I tell it especially to the young people of this nation who might be tempted by drugs. ³¹I want them to remember the words of the snake: **You knew what I was when you picked me up.**

This paragraph features references to the author as **I** and the use of the present tense; it identifies the addressees of the story (**the young people of this nation who might be tempted by drugs**) and the purpose of telling the story, with the last statement of the snake highlighted in boldface. This paragraph is expository on surface, skewed from the notional hortatory, just as P6-7 are in the earlier text on shopping. When we read this last section of the text, we can then identify the overall text as hortatory notionally, warning against drugs, with a lengthy, poignant story embedded in it to make his point. It is specially poignant, I think, because the Indian youth's behavior is strictly to help the snake; he didn't pick it up to get any reward or benefit. It was a purely well-intentioned act of helping your neighbor, but the result was getting bitten by your neighbor. Certainly, the hortatory text is cast not only much more vividly as Longacre says, but also more powerfully and dramatically, using the embedded narrative than would have been without such a story.⁸

Of course, there are other texts without any embedding or skewing of discourse types. A story may be told in the mainline tense of past as in the following short narrative.

Example 4

After hearing me talk about my job, my young son looked forward to spending the day with me at the office. Although usually shy, he seemed eager to meet each co-worker I introduced. On the way home, however, he appeared sullen. I couldn't see the reason for his disappointment until he complained, "I never got to see the clowns you said you worked with." (Contributed by Marvella McDill, Reader's Digest, August 1988:121).⁹

Similar to the climax of the snake story, there is an interesting switch between the usual functions of subordinate vs. main clauses, i.e., the subordinate clause (**until he complained...**) reports the mainline actions--the speech act. This switch, together with the direct quotation, gives the punch line of the story.

5. Conclusion

Texts, in general, are not simply of one discourse type (or genre), such as narrative and expository, but a combination of types which can be described by embedding and skewing within an overall type. Such embedding and skewing of discourse types can be quite complex, but they achieve an effect which is not possible in a text with only one type throughout. In spite of its complexity, we can identify the overall type of a text. Identifying different portions of the text as to their discourse types helps us to understand the functions of syntactic structures such as nouns, verbs, and clauses.

Notes

1. Languages with the basic word (constituent) order of SOV do not seem to vary their word order according to discourse types, but further in-depth studies are needed to learn more about the interaction between word order and discourse.
2. See Kent (1992) for a view of description as a separate genre.
3. For some discussions on the relation between narrative and expository, see Dubois (1992) and Gillespie (1992).
4. "How Much Money Smart Supermarket Shopping Can Save." Copyright 1988 by Consumers Union of U.S., Inc., Yonkers, New York 10703-1057. Excerpted by permission from Consumer Reports, March 1988. Reprinted with permission also from the August 1988 Reader's Digest.
5. See Hwang (in press) for a presentation of schematic slots for a hortatory text.
6. Reprinted with permission from Guideposts Magazine. Copyright 1988 by Guideposts Associates, Inc. Carmel, New York 10512.
7. See Longacre (1983:ch.2) and Hwang (1989) for the dialogue analysis.
8. Among the eight Korean stories I (Hwang 1987) have analyzed, one story entitled "The Beauty and the Monk" starts with an expository paragraph introducing a pagoda with a legend. The rest of the text is a narrative about the legend. I called the initial expository material a prologue, a margin to the narrative, but it is possible to classify the text as an overall expository, explaining about the pagoda, with an extensive narrative embedding. See Hwang (1989) for a discussion of embedding at the paragraph and discourse levels of this Korean text.
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References

- Adelstein, Michael E. and Jean G. Pival. 1980. *The writing commitment*. 2d ed. New York: Harcourt Brace Jovanovich.
- Beekman, John, John Callow, and Michael Kopesec. 1981. *The semantic structure of written communication*. Dallas: Summer Institute of Linguistics.
- Dubois, Betty Lou. 1992. From narrative toward exposition. In Hwang and Merrifield, 157-88.
- Gillespie, Steven J. 1992. Narrated thought and sequential argument: A comparison of two texts by C.S. Lewis. Ph.D. Dissertation, University of Texas at Arlington.
- Hwang, Shin Ja J. 1987. *Discourse features of Korean narration*. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- , 1989. Recursion in the paragraph as a unit of discourse development. *Discourse Processes* 12.461-77.
- , 1992. The functions of negation in narration. In Hwang and Merrifield, 321-37.
- , in press. Analyzing a hortatory text with special attention to particle, wave, and field. *The 18th LACUS Forum 1991*, ed. by Ruth M. Brend and Richard Bailey. Lake Bluff, IL: Linguistic Association of Canada and the United States.
- , and William R. Merrifield (eds.) 1992. *Language in context: Essays for Robert E. Longacre*. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Kent, Carolyn E. 1992. A tagmemic analysis of coherence in writing. In Hwang and Merrifield, 189-210.
- Longacre, Robert E. 1982. Discourse typology in relation to language typology. *Text processing: Text analysis and generation, text typology and attribution*, ed. by Sture Allén, 457-86. Stockholm: Almqvist and Wiksell.
- , 1983. *The grammar of discourse*. New York: Plenum Press.
- , 1985. Discourse peak as zone of turbulence. *Beyond the sentence*, ed. by J.R. Wirth, 81-98. Ann Arbor: Karoma.
- Nord, Christiane. 1991. *Text analysis in translation: Theory, methodology, and didactic application of a model for translation-oriented text analysis*. Amsterdam: Rodopi.
- Tuggy, John C. 1991. Schema: A fundamental communication concept and interpretive tool. Paper presented at the Seminar on Discourse Features of the Text of the Greek New Testament, Dallas.
- Ventola, Eija. 1989. Problems of modelling and the applied issues within the framework of genre. *Word* 40(1-2): Systems, structures, and discourse, 129-61.

PRESUPPOSED VERSUS ASSERTED PROPOSITIONS: THE INFORMATION STRUCTURE OF DARI

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Introduction

An aspect of discourse structure that has received comparatively little attention is that of the information structure of a text. Within Systemic linguistics, message structure (or Theme/Rheme structure) has been intensively investigated, but its companion, information structure (or Given/New structure), has not been so readily the focus of analysis. Yet the flow of a text is vitally dependent upon how information is encoded and presented to an audience.

It has been taken as a universal constraint that the introduction of new information cannot appear in clause-initial position and any new information must be anchored in some way by given information. Yet, analysis of actual data shows that often a clause will consist entirely of new information. This is most obvious at the beginning of a text, but clauses containing only new information may, and do, appear almost anywhere in a text. In my own investigation of an oral Dari narrative, for example, I found numerous clauses where both the Theme and the Rheme were new information; that is, the clause was entirely new. How is new information introduced into a text and what constraints are there on the presentation of this new information? This paper investigates some of these presentational constraints on the proposition structure of Dari, looking at how the language anchors what is new and the grammatical relationship between this newly asserted material and presupposed material.

English Background

In English, we are all familiar with the typical fairy tale or nursery rhyme beginning:

There was an old woman who lived in a shoe

This type of introductory sentence is common in English in all types of narrative but is used most often in short tales, and there is a reason for this. By using the *there* construction the encoder accomplishes in a single sentence to both present a topic and say something about that topic. Knud Lambrecht calls this type of *there* clause a "presentational relative construction", the pragmatic function of which is "to establish a new discourse referent and to express a proposition about it in the same minimal sentential processing unit" (333). In other words, the speaker encodes the noun phrase simultaneously as a presentational focus and as the topic of a proposition. In the above example, the character of the old woman must first be introduced on the scene and then the place of her abode can be established. This is done in one fell swoop, an economical way of moving the discourse and keeping the focus intact.

Presentational constructions are important discourse devices. New information cannot just be dropped into the text; it must be either asserted (*there was an old woman*) or it is presupposed (*an old woman*). If information is not asserted, then the decoder takes the information as given or known, in some fashion. If the familiar nursery rhyme had started *An old woman*, we would have to presuppose the existence of an old woman. On the other hand, *there was an old woman* does not presuppose her existence but formally introduces her presence into the text. Once the old woman is introduced, the encoder can make an assertion about her. This main assertion is *lived in a shoe*; it is this that the sentence is about, the purpose for the proposition. *lived in a shoe*, however, is embedded in a grammatically-dependent relative clause while the presentational clause (*there was an old woman*) is grammatically-independent (Lambrecht 1988). Thus, we have a construction where the grammatically-independent constituent is semantically dependent, and the grammatically-dependent constituent is semantically independent.

How do other languages establish and anchor new discourse referents? While the *there* construction is a familiar device in English, such a construction is not an option open to speakers of Dari. Instead, Dari employs other devices that have the same effect of grammatically subordinating the main assertion to the presupposed proposition.

Structure of Dari

Dari is the academic term for Afghan Persian, one of the three main dialects of Persian. It is an oral dialect, all written Persian being literary Tehranian Persian. Persian, in general, is what Joseph Greenberg has called a rigid verb-final language. For the most part in Dari, the verb comes at the end of the clause. Other constituents occur grammatically in relatively free word order. Contextually, there is less freedom of choice.

In contrast to the head-last nature of the clause, the noun phrase is basically head-first. [For an indepth analysis of the Dari noun phrase, see Rashidi 1988 & 1989.] The head is followed by post-modifiers, all connected in relatively rigid word order to the head or preceding modifier by the *ezafe* connector, *e*. Because of the *ezafe* connectors, noun phrases are easily distinguished as single clausal constituents, as opposed to, say, a subject noun plus an adjective complement.

In addition, Dari is a zero-subject language; subjects are not necessarily overtly present. In fact, they are only realized grammatically when there is a specific semantic reason for doing so. As a result, 'dummy' subject constructions, such as *there* and *it*, do not occur.

Analysis

Dari speakers have different resources available to them to accomplish the task of anchoring new information. These devices, however, have the same effect as the English *there* of grammatically subordinating the main assertion to the presupposed proposition. The most common of these constructions is the existential clause. True existential

clauses are rare in English but are rife in Dari. These clauses have, by definition, only a single participant, realized as a noun phrase, followed by a form of the copula (Rashidi 1991). An example follows:

1. **yak sang-e sia / 1st**
 one rock-E black is [E=*ezafe*]
 'there is a black rock'

The clause has been translated as 'there is a black rock', but literally it means 'a black rock exists'. Sometimes these existential clauses are used as presentational constructions where both the grammatically-dependent main proposition and the grammatically-independent anchoring proposition are new information. In these clauses, the proposition that the speaker is asserting and then presenting as presupposed is the head of the noun phrase (in this case, **yak sang**, 'a rock'), and the main, newly-asserted proposition is the post-modifier (in this case, **sia**, 'black'). The following are some examples that occurred in the text of an oral narrative of the history of Islam.

2. **čišm-aa-e zamarud / bud**
 eye-PL-E jade was
 'there were eyes of jade'

Example 2 occurs in a section of the text where the narrator is describing the opulence of the idols that had distracted the Arabs from their worship of God. The previous clause is: "one idol was made of ruby." It is not the existence of eyes here that is the main assertion but the fact that they are made of jade. 'Eyes', however, has not yet been introduced into the text. The narrator could have introduced this new participant in any number of ways, but chose to do so with this existential proposition. This puts the main assertion, 'jade', in the most focal point for Dari clauses, the position directly in front of the verb, giving 'jade' high communicative weight even though it is grammatically dependent upon 'eyes'. Thus, the narrator has in a single short clausal constituent both

introduced a new discourse referent and asserted a proposition about it. The pragmatic purpose of the noun, *člšmaa*, 'eyes', is to anchor the modifier, *zamarud*, 'jade', that follows.

3. *dewal-aa-e gali-e kalon kalon / saxta šuda bud*
 wall-PL-E mud-E large large made became was
 'there were made very large mud walls'

Example 3 is more complex but illustrates the same use of an existential clause to both establish a new referent and make an assertion about that referent. A fluent English translation of this clause is elusive, but the semantic intent is clear: it is not the existence of the walls that is the core of the proposition but their size. The head of the noun phrase is *dewal*, a new element. *Dewal* is followed by *gali*, 'mud', another new element but not really news because all walls in Afghanistan are made of mud. The final constituent in the noun phrase is *kalon kalon*, meaning 'very large'. This element is, like *zamarud* in the previous example, in the most prominent position in the clause, and 'very large' is the reason for the proposition; the narrator's main point here is that the mud walls were very large.

This existential presentational structure is in contrast to relational clauses where the attribute is not connected to the Thing (in Halliday's terms) in a single clausal constituent. For example, the narrator could have said:

- 3' *dewal-aa-e gali / kalon kalon / saxta šuda bud*

By not connecting the *kalon kalon* to the Thing (*dewal*), the existence of the wall is no longer asserted but is, in fact, presupposed. 3' would not occur where *dewal* was new information; it would only occur where *dewal* was, in some fashion, presupposed.

A second construction that appears to work in the same manner is the *ke* clause. *ke* in Dari is essentially equivalent to the English relativizer *that*. Take for example the following noun phrase:

- 4a. **ham-e musulman-aa-e ke me-amad-an**
 all-E Muslim-PL-E that IMP-came-3p
 'all the Muslims that came'

In 4a, the **ke** clause is part of the noun phrase, acting as a post modifier of 'Muslims'. This particular noun phrase comes from a sentence in the text, the rest of which is:

- 4b. **sang-a / tamas me-kard-an**
 rock-DO touch IMP-did-3p
 'touched the rock'

In this case, 'Muslims' has already been introduced into the text, and so there is no need for a presentational construction. If, however, the narrator had needed to introduce this participant, he would have said, in effect first creating an existential clause:

- 4' **ham-e musulman-aa-e ke me-amad-an/ ast/**
sang-a/ tamas me-kard-an

In this way, the narrator would first present the new participant, the Muslims, and then make his assertion about them, 'they came'. This kind of Dari construction is difficult to render in English because it is densely packed. When I first began to analyze these clauses, there seemed to be an 'extra' copula in the middle; but all of these copulas were realized in their fullest phonological form as **ast** rather than the more usual reduced forms. It soon became clear that there was a definite discourse reason for the inserted copula: the narrator was, in effect, creating an existential clause in order to introduce into the text a new participant about which he wished to make an assertion. An example from the narrative follows:

5a. mazjīd/ ke// ast// yak dar berun-iš yak joi/ ist/
 mosque that is one in outside-its one place is
 'there is a mosque outside of which there is a place'

Here the narrator first presents the new participant, the mosque; then he makes his assertion about it: 'outside of it is a place'. The main assertion is not the existence of the mosque but the fact that there exists a place outside of it that is an important spot. Since the narrator has not mentioned the mosque previously, he must first introduce it into the text. He does this by means of an existential clause, the semantic core of which is the post-modifying *ke* clause, *ke yak dar berun-iš yak joi ist*.

The first *ke* clause is followed by a second *ke* clause modifying *joi*. Having established a location, the narrator can now make his main sentential assertion: a black rock is located there. A lot of information is packed into a single complex clause, accomplishing the feat of establishing a new participant (the mosque), making an assertion about it (there is a place outside it) and then making a main assertion about the place (there is a black rock installed there). The narrator is now free to discuss the black rock, which he proceeds to do in the subsequent text.

Both the establishment of the location and the main assertion, the existence of the black rock, are embedded in grammatically-dependent *ke* clauses, the second *ke* clause being embedded in the first *ke* clause. Thus, the most grammatically-dependent constituent is also the most semantically independent constituent. The main verb is the *ast* that follows the first *ke* (between the double slashes). Its location after the *ke* seems unusual but it must be kept in mind that this is an oral narrative. The final *ke* clause, *ke yak sang-e sia-st nasb ast*, contains a second embedded presentational existential construction, *yak sang-e sia-st*. Again, the black rock, which is new information, cannot be presupposed; it must be asserted. The narrator does this by inserting *-st*, creating the existential 'there is a black rock. Then he makes his assertion about it, 'it is installed.' If the

narrator had presupposed the existence of the black rock, he would have left out the **-st** and said simple 'a black rock is installed.'

A less involved example of a presentational existential clause comes at the end of this narrative, where there appears a series of statements establishing what books are holy in Islam. The first of these clauses is:

6. **Injil / Ist / ke az hazrat-e esau / -s**
 Bible is that from Hazrat-E Jesus is
 'there is the Bible that is from Jesus'

The narrator is emphasizing that Muslims recognize not just Mohammed as a prophet, but also the prophecy of the Judeo-Christian tradition. The semantic core of this statement is that the words of Jesus are holy. But the narrator does not just say **Injil ke az hazrat-e esau-s**, 'the Bible is from Jesus'. He first introduces the participant of the Bible into the text by creating an existential. This **ke** clause follows the main verb, its unmarked location for this type of proposition.

Conclusion

Thus, we see that the message structure of a language does impose constraints on proposition structure. Presentational constructions are important discourse devices. In Dari, the existential clause serves to introduce new material into the text while at the same time preserving the focus and maintaining the flow of ideas. Like the English *there* construction, Dari existential clauses allow the speaker to use the resources of the language to economically encode a single constituent simultaneously as a presentational focus and as the topic of a proposition.

References

- Greenberg, Joseph. 1963. "Some universals of grammar with particular reference to the order of meaningful elements." In Universals of Grammar, second edition, ed. J.H. Greenberg. pp.73-113.
- Halliday, M.A.K. 1985. An Introduction to Functional Grammar. London: Edward Arnold.
- Lambrecht, Knud. 1988. "There was a farmer had a dog: syntactic amalgams revisited." In Berkeley Linguistic Society. Parasession on Grammaticalization. Feb.13-15.
- Rashidi, Linda. 1988. "A preliminary look at the Dari noun phrase: a stratificational view." Unpublished manuscript.
- 1989. "The experiential structure of the Dari nominal group." Paper presented at the 16th International Systemic Congress, Helsinki, Finland.
- 1991. A Functional Analysis of the Clause Structure of Dari. Ph.D. Dissertation, Michigan State University.

DISCOURSE, STYLE, AND MEASUREMENT: MORE ON NARRATIVE

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In recent years, a number of linguists have taken up the study of narrative discourse. These studies have been situated in a number of subdisciplines: text linguistics, psycholinguistics, sociolinguistics, discourse analysis, theoretical linguistics, etc. In addition, workers in stylistics, composition studies, rhetoric, literary scholarship, anthropology, feminist studies, history, and literary theory have begun to examine narrative from their own particular theoretical, political, and methodological standpoints. The bibliography for this paper contains a few representative examples. At the Eighteenth LACUS Forum, Mills (1991) and Meyer (1991) presented papers on narrative, concentrating especially on the narrative of personal experience.

The study of narrative is, of course, much older, and the interest in narrative by linguists is by no means limited to recent studies. Halliday's (1971) exploration of Golding's *The Inheritors* constituted a significant effort but one which does not appear to have led to a significant body of stylistic analysis within the school of Systemic Grammar or in literary stylistics. Because Systemic Grammar was never bound to the sentence as generative grammar seems to have been, it was not surprising to see Halliday and Hasan's (1976) *Cohesion in English* taken up by researchers in search of a model of linguistic structure beyond the sentence. But it is safe to say that this book has had more influence on composition studies than on literary stylistics or the general study of style in language. Since style is, in large part, a social phenomenon, we might expect the discipline of sociolinguistics to have led to interesting approaches to style in language. We do find the beginnings of such approaches in the work of Labov and his colleagues (Labov & Waletzky, 1967; Labov, 1972a, 1972b), but the Labovians have published surprisingly little on style for its own sake. And the fine collections of papers from the end of the 1950's edited by Thomas Sebeok (1960) has not led to the establishment of a school of narrative discourse analysis within the field of stylistics.

In the opening section of my presentation to the Eighteenth LACUS Forum, I argued that the analysis of narrative discourse, in particular, and stylistics, in general, suffered from severe methodological limitations: in the failure of stylistic analysts to get beyond the field's beginnings in literary scholarship.

In this mode of inquiry, the scholar conducts a great many observations (whether such observations come from folkloristic recording of naive subjects in the field or perusing texts in the library is of no consequence), acquires a certain amount of data, searches for patterns emerging in the data, interprets those patterns, usually in the context of an implicit theory, and returns to the data for evidence to support the scholar's interpretation. Under these

sorts of procedures, sampling and data gathering tend to be opportunistic, analysis tends to be selective, and interpretation tends to be impressionistic.

In my earlier study, I began with a few naive questions: Are there aspects of linguistic structure, especially choices among syntactic structures and lexical items, that characterize narrative discourse by individuals? Do factors such as topic, discourse context, dialect, and other sociolinguistic matters affect choices among sentence structures or among (roughly) equivalent lexical items?

The (1991) study also adopted methodological requirements that sampling of narratives be systematic and as close to random as practicable and that research hypotheses be stated in quantitatively testable form. Not that quantitative methods confer any particular magic on studies that employ them. Systematic sampling has long been a concern in linguistics, though it has been honored in stylistics and discourse analysis more often in the breach than in practice. And statistical testing of hypotheses can be of value--as long as crucial assumptions are noted and met--because they force the researcher to be explicit when collecting, organizing, analyzing, and interpreting data.

For the present, I have limited my discourse analysis to narrative in order to limit the area of the study in a principled way. Narrative also has the added advantage of being both an oral and a written form. Eventually, extensive quantitative comparisons of spoken and written narrative discourse should be possible.

The current study is an extension of the 1991 LACUS paper. That study focused on samples from novels from four major early-twentieth-century novelists: ten randomly selected passages, from 1 to 2 pages long, were selected from Ernest Hemingway's *A Farewell to Arms*, F. Scott Fitzgerald's *The Great Gatsby*, Edith Wharton's *The Old Maid*, and William Faulkner's *Sanctuary*. For the literary works, I wanted randomly chosen passages of connected discourse. Page numbers from each work were chosen randomly in advance. If, on inspection, a page was found to be mostly dialogue, it was rejected and I moved on to the next randomly chosen page. If a page contained at least one-half narrative, it was chosen, minus dialogue, for analysis. The sample of literary works is, technically, a stratified random sample. The 10 passages from Hemingway contained 3,218 words, from Fitzgerald 2,664 words, from Wharton 2,126 words, and from Faulkner 3,120 words.

From a different discourse community, present-day college freshmen, a section of English 102 wrote an essay that began with Labov's (1972b) "Danger of Death" question: "Have you ever been in a situation where you thought you were in serious danger of being killed. . .?" In case some students had never been in such a situation, they could also choose to write on another question: "Have you ever been in a fight?" Ten essays, amounting to a total of 3,300 words, were included.

Five oral narratives, or narratives with oral sources, were also included in the sample. One was a story, given spontaneously in the course of a dialect survey by Buck, owner of an insurance agency in Hillsboro, Ohio, of how a person who did not know him had deduced Buck's residence from the way he spoke. A second oral narrative was a 470-word passage from Stephen Cruz's account of his experience with the American dream and the world of work (Terkel, 1980). A third was a 489-word sample from Charlie Sabatier's account of his struggle for civil rights for the handicapped (Gwaltner, 1986).

The fourth was Rose B.'s account of being in a car wreck (Labov, 1972b). And the fifth was Roberta Victor's account of her life as a prostitute (Terkel, 1972).

For the present study, the 1991 data have been extended. Members of the LACUS Forum pointed out that Terkel's presentation of oral narratives tend to be rather heavily edited. In any case, the oral narratives used in 1991 were too few to lead to rigorous analyses. Collection and transcription of additional oral narratives prompted by Labov's "Threat to Life" question are still in progress and will not be discussed here.

The literary narrative database has, however, been expanded. Because of a suggestion from a member of the 1991 Forum, Don Marquis' (1924) *The Old Soak's History of the World* was sampled according to the procedures used for literary works. Including this work had the effect of adding a new kind of discourse, the pseudo-oral literary narrative, which we might expect to share some characteristics with freshman essays and some with true literary novels. The addition of this oral-literary discourse kind suggested that we might profitably look at the masterwork in this genre, Mark Twain's (1885) *Huckleberry Finn* (1961). Ten samples from *Huck Finn*, amounting to 4,139 words, were included in the present study. Inclusion of Twain's classic proved fortuitous because *Huck Finn* and Twain's use of language in it have recently been in the news: Shelley Fisher Fishkin (forthcoming) has, according to prepublication reviews (Winkler, 1992), argued that syntactic and lexical aspects of Huck's language are characteristic of the speech of nineteenth-century African Americans and linked to present-day Black English Vernacular.

To study the differences between purely literary and oral-literary discourse, I also added 10 samples (3,897 words) from Twain's much more self-consciously literary *Tom Sawyer* (1876).

The 1991 study concentrated on syntactic features suggested mainly by Givón (1979). Many of these features, suggested by Givón and other workers as diagnostic of normal syntactic practice, turned out, on examination, to be too rare to study. While Givón's views on passives, both long (agented) passives and short (agentless) passives, seemed to be supported in the 1991 study. Similarly, Beaman's views on coordination and subordination appeared to be supported. Furthermore, the proportions of coordinate structures did not differ significantly among freshman, literary or oral samples. The same was true of proportions of embedded sentences.

For occurrences of verbs ending in *ing*, we saw that the practices of literary authors, including Faulkner, whose use of *V-ing* was tabulated by Toolan (1990), do not differ significantly from those of college freshmen or oral narrators.

In the earlier study, freshmen wrote significantly shorter (mean=14.7 words) sentences than literary authors (mean=19.4). Though sentences were shortest in the oral narratives (mean=12.4), they did not differ significantly from either of the other groups. In the 1991 literary samples, Hemingway wrote significantly shorter sentences (mean=13.2 words per sentence) than Fitzgerald (mean=21.8) or Wharton (mean=24.7). Despite Faulkner's reputation for long sentences, his (mean=17.9) are not significantly longer than Hemingway's or shorter than Fitzgerald's or Wharton's.

The number of embedded sentences per thousand words also differed significantly among the groups. Surprisingly, the literature samples (mean=54.8 embedded sentences per thousand words of text) were significantly lower than the freshman samples (mean=72.9). The oral

narratives were also high (mean=72.0), though not significantly higher than the literature samples. When we look only at the literature samples, we find that the differences among authors for this feature are significant ($p=.0483$), with Hemingway (mean=43.6) using fewer than Faulkner (mean=54.9), Wharton (mean=58.7), or Fitzgerald (mean=62.0), but pairwise comparisons do not show that any one of these authors differs significantly from any other.

Besides expanding the sample, the work reported here differs from the 1991 study in focusing on the effects of different linguistic features, though some aspects of the earlier study were extended. The study compares linguistic features by discourse genre: literary (Faulkner, Fitzgerald, Hemingway, Wharton, and Twain (*Tom Sawyer*)), oral-literary (Twain (*Huckleberry Finn*) and Marquis), freshman, and, to a limited extent, oral sources. Differences among individual authors were also examined.

On sentence length, the mean for all samples was 19.9 words per sentence (s.d.=7.9). When comparing sentence length by genre, statistical examination of the data revealed that the assumptions of normal distribution and homogeneity of variance required for Analysis of Variance (ANOVA) (Norusis, 1990) were not met. A Kruskal-Wallis nonparametric one-way ANOVA indicates that there are significant differences (chi-square=26.8, $p<.0001$) in sentence length among the four genres. Excluding the few (5) oral samples from the test leads to the same results. Mann-Whitney tests indicate that freshmen (mean sentence length=14.3 words) write significantly shorter ($p<.05$) sentences than literary (mean length=18.8 words) or the oral-literary sources (mean length=27.3 words; $p=.0001$). The oral-literary sources (Marquis and Twain (*Huck*)) yield the longest sentences of all, significantly longer ($p=.0002$) than even the literary samples.

Examining sentence length by individual authors shows that sentence length increases from Hemingway (mean=13.6 words) to the freshman writers (mean=14.3) to Faulkner (mean=17.8) to Twain (both *Huck* and *Tom*) (mean=21.1) to Wharton (mean=21.2) to Fitzgerald (mean=22.2) to Marquis (mean=31.6). A Kruskal-Wallis test indicates that the differences among authors are statistically significant (chi-square=40.1; $p=.0000$). A Mann-Whitney test shows that the difference in sentence length between Marquis and Fitzgerald, the second-longest, is significant ($p<.05$). Thus, Marquis' sentences are significantly longer than all the other authors as well. Similarly, Fitzgerald's sentences are significantly longer than those of the freshmen ($p<.005$) or Hemingway ($p<.0005$). While Twain's sentences are longer ($p<.005$) than the freshmen or Hemingway, but not Faulkner.

Sentence length is a rather crude marker of syntactic style. Because syntactic complexity has often been suggested as a marker of individual or genre style (Hunt, 1965), although Mills (1990) has argued that this marker is less than precise, the 1991 study examined some aspects of sentence embedding. The present study looks at the use of relative clauses in the various genres and among individual authors. Results were not impressive. There were not enough occurrences of relative clauses per sample to permit their classification into restrictive versus non-restrictive, *who*-clauses versus *that*-clauses, etc. Excluding the oral narratives (because there were only 5 of them), it turned out that 13 of the samples had no relative clauses, 16 had one, 19 had two, 12 had three, 11 had four, 5 had five, 2 had six, 1 had seven, and one had eight. A one-way ANOVA showed no significant differences among relative clauses per thousand words for the literary, oral-literary, or freshman samples. Relative clauses per thousand words differed significantly among

authors ($F=2.37$, $p<.05$), but there were no significant pairwise differences.

Looking only at the Twain samples, relative clauses per thousand words of text did not differ significantly ($t=.31$, $p=.76$) between *Huckleberry Finn* and *Tom Sawyer*. Looking only at the oral-literary genre, there were no significant differences between Twain (*Huck Finn*) and Marquis.

Counting the occurrences of infinitives, on the other hand, yields some interesting findings. A one-sample chi-square test shows significant differences in the number of infinitives among all samples ($\chi^2=19.647$, $p<.05$). Twenty (of 50) literary samples had 2 or fewer infinitives, 17 had from 3 to 5, 9 had from 6 to 8, and only 4 had more than 8. None of the 20 oral-literary samples had fewer than 3 infinitives, 5 had from 3 to 5, 9 had from 6 to 8, 5 had from 9 to 11, and one had more than 11. The 10 freshman samples tended to follow the pattern of the oral-literary ones: none had fewer than 2 infinitives, had between 3 and 5, 5 had between 6 and 8, 2 had between 9 and 11, and one had more than 11.

If we calculate the number of infinitives per thousand words of text, a one-way ANOVA shows significant ($F=8.5927$, $p<.005$) differences among genres. Pairwise comparisons reveal that literary samples (mean=12.2) have significantly fewer infinitives than freshman samples (mean=25.3), and Oral-literary samples (mean=16.7) have significantly fewer infinitives per thousand words than freshman essays.

Differences in infinitives per thousand words of text are also significant ($F=6.0965$; $p<.0005$) among authors. Twain, with an average of 18.8, had significantly more infinitives per thousand words than Faulkner (mean=7.07). The freshmen (mean=25.3) had significantly more infinitives per thousand words than Faulkner, Fitzgerald (mean=10.4), or Hemingway (mean=10.5).

In the Twain samples alone, we find that the average number of infinitives per thousand words is not significantly higher in *Huckleberry Finn* (mean=19.5) than in *Tom Sawyer* (mean=18.35). Among the Oral-Literary samples Twain's *Huck Finn* (mean=19.3) does not have significantly more infinitives per thousand words than Marquis (mean=14.1).

The notion of specific choices among lexical items might mark the style of a genre, a writer, or a particular work has long intrigued workers in stylistics, though it has exercised less influence over discourse analysts. Preliminary reviews of Fishkin's study of *Huckleberry Finn*, to take one example, remark on the tendency of Huck, and the African American boy on whom his character ostensibly based, to coin new words. In another study, Toolan (1990) tabulated the personal pronouns used in a work by Faulkner. Toolan (1990) also counts the number of present participle (V -ing) forms used by Faulkner in a given work and draws some tentative conclusions from such counts. Earlier, Page (1966, 1968) suggested that we might be able to characterize a particular speaker's or writer's style by counting the "proportion of uncommon words," with *uncommon* left undefined.

At the Fifteenth LACUS Forum (Mills, 1988), I showed that counting lexical items or classes of lexical items is not a good way to characterize written style precisely. But I also presented evidence that V -ing forms might be significantly correlated with some aspects of style.

For the present study, I recorded the number of V -ing forms per sample and then calculated their rate of occurrence per thousand words of text. As I had showed in Mills (1988), the rate of occurrence of V -ing forms did not vary significantly across discourse kinds: literary, oral-literary, and freshman writers did not use significantly different numbers of V -ing forms.

On the other hand, when we analyze the use of *V-ing* forms by individual authors, we find that Toolan's (1990) focus on Faulkner's use of such forms may not have been misplaced. Considering the occurrence of *V-ing* forms, we find that Wharton (mean=4.3) used the fewest, followed by Hemingway (mean=4.8), Fitzgerald (mean=6.7), Marquis (mean=8.3), Twain (mean=8.4), the freshmen (mean=9.3)--with Faulkner (mean=12.3) having far and away the heaviest use of present participles.

Data for both the absolute count of *V-ing* forms and their rate of occurrence per thousand words are not exactly normally distributed, but they are close, and these data do meet the requirement of homogeneity of variances. A one-way ANOVA shows ($F=4.7967$; $p<.0005$) that the authors differ significantly and that Faulkner has significantly more *V-ing* forms ($p<.05$) than Wharton or Hemingway. Calculating the rate of *V-ing* forms per thousand words shows that Faulkner has more *V-ing* forms than Hemingway, Marquis, or Twain.

Since Fishkin's analysis of *Huckleberry Finn* apparently refers to similarities in verb forms between BEV and the language of Huck, I also examined the occurrence of *V-ing* forms in these two works. In the two Twain samples, neither the frequency of *V-ing* forms ($t=.81$; $p=.43$) nor the rate of *V-ing* forms per thousand words ($t=.74$; $p=.467$) differed significantly.

Page's (1966) contention that the proportion of uncommon words in a work might characterize its style has proved popular from time to time with researchers in stylistics. At least according to prepublication reviews, Fishkin (forthcoming) notes Huck's use of neologisms. Finn (1977) proposed to make Page's notion of "uncommon words" more precise (and quantitatively testable) by using the probability of each word's occurrence in normal English. By 1977, a few large corpus-based studies of English had calculated such probabilities. In particular, Finn proposed that researchers use each word's Standard Frequency Index (SFI), as calculated by Carroll, et al (1971). The SFI measures a given word's probability of occurrence on a logarithmic scale: "if a word has an SFI of 90, one would expect to find it once in every ten words (the word *the* has an SFI of 88.5). If a word has an SFI of 80, one would expect to find it once in every 100 words" (Finn, 1977: 74), and so on.

In Mills (1988), I presented data to show that a general use of the overall mean SFI for a writing sample did not yield usable results. But Finn had suggested that the SFI would be most useful in characterizing style if researchers examined the SFIs of "Abstract Nouns, Verbs Denoting Cognitive Activity, and Adjectives Judging an Abstract State" (Finn, 1977: 85). Mills (1988) showed that the SFIs of none of these lexical classes revealed anything interesting about style. On the other hand, the SFI of English present participles (*V-ing* forms) did appear to be correlated significantly with judgments of the effectiveness of written discourse (Mills, 1988). Finally, Mills (1989) showed that the SFI could be used to support the contention that Shakespeare could not be ruled out as the author of a poem attributed to him.

Because of the importance of *V-ing* forms as markers of style and because the SFI of such lexical items had proved useful, if enigmatic, in earlier studies, I examined their role in distinguishing the samples chosen for this study.

Overall, the mean SFI for *V-ing* forms was 52.068 (s.d.=12.76), with the median at 55.75. The maximum SFI for *V-ing* forms was 66.9 (We would expect to find the average *V-ing* forms a little less than once in every 1,000 words of running text.), and the minimum was 0 (words that do not

appear in Carroll, et al.).

Examining the role of V *-ing* forms in distinguishing among discourse kinds, we find that literary samples had the lowest mean SFI (49.9)--followed by the freshman essays (53.3), the oral-literary samples (54.7), and finally the oral narratives (56.8). Because a plot of SFI by genre does not support the assumption of homogeneity of variances, use of the ANOVA is ruled out. However, a Kruskal-Wallis test shows ($p < .0001$) that SFI differs significantly among the genres. Pairwise comparisons using the Mann-Whitney nonparametric test show that the literary samples have a significantly ($p < .0001$) lower SFI than the oral-literary samples and ($p < .005$) the freshman essays. The freshman essays are significantly lower in SFI for V *-ing* forms ($p < .05$) than the oral narratives, though the small number of oral narratives makes this result questionable. Freshman essays are not significantly lower than the oral-literary samples.

The SFI of V *-ing* forms is, at the same time, less useful in characterizing the styles of individual authors. Again, the assumption of homogeneity of variance is not met, so the ANOVA is not usable to analyze SFI differences for V *-ing* forms among authors. The more conservative Kruskal-Wallis nonparametric ANOVA reveals significant ($p < .005$) overall differences among authors, but pairwise comparisons do not reveal any significant differences between any two authors.

Within the samples from the two works by Twain, the mean SFI for V *-ing* forms is 48.8 for *Tom Sawyer* and 53.5 for *Huckleberry Finn*. This difference is significant ($t = -2.31$; $p < .05$). So it appears that the probability of occurrence of V *-ing* forms may establish differences between the "literary" Twain (*Tom Sawyer*) and the "oral-literary" Twain (*Huckleberry Finn*), although more research is needed. On the other hand, within the oral-literary genre, there is no significant difference between the mean SFI for V *-ing* forms in *Huckleberry Finn* and Marquis' *Old Soak*.

So it appears as though the SFI for V *-ing* forms is important, though we do not yet know why exactly, for distinguishing one discourse genre from another rather than for distinguishing one author's style from that of another. These results would tend to offer support for Toolan's focus on Faulkner's use of V *-ing* forms and for Fishkin's concentration upon Huck's verbs.

A more detailed quantitative critique of Fishkin's work on Twain must, of course, rest on more than prepublication descriptions of her findings. An attempt to incorporate the SFI--of all major lexical classes--and a measure of syntactic complexity derived from Head Driven Phrase Structure Grammar (Pollard & Sag, 1987) into a comparison of *Tom Sawyer* and *Huckleberry Finn* is now in progress, but preliminary results are not encouraging. Perhaps a more revealing approach to syntax and discourse could be based upon functional linguistics, in particular one based upon grammatical relations as in Hudson (1992).

REFERENCES

- Beaman, K. 1984. Coordination and subordination revisited. *Coherence in spoken and written discourse*, ed. by D. Tannen. Norwood: Ablex. 45-80.
- Beaugrande, R. de, & Dressler, W. 1981. *Introduction to text linguistics*. London: Longman.
- Carroll, J., Davies, P., & Richman, B. (Eds.). 1971. *The American*

- heritage word frequency book*. New York: Houghton Mifflin.
- Chafe, W. 1980. *The pear stories: cognitive, cultural, and linguistic aspects of narrative production*. Norwood: Ablex.
- Clemens, S. 1961 [1885]. *Adventures of Huckleberry Finn*, ed. by S. Bradley, et. al. New York: W.W. Norton.
- _____. 1955 [1976]. *The Adventures of Tom Sawyer*. Racine: Whitman Publishing.
- Dijk, T. van. 1977. *Text and context*. London: Longman.
- Faulkner, W. 1931. *Sanctuary*. New York: Random House.
- Finn, P. 1977. Computer-aided description of mature word choices. *Evaluating writing*, ed. by C. Cooper & L. Odell. Urbana: NCTE: 69-89.
- Fishkin, S. Forthcoming. *Was Huck black? Mark Twain and African-American voices*. Oxford: Oxford University Press.
- Fitzgerald, F. S. 1925. *The great Gatsby*. New York: Scribner's.
- Givón, T. 1979. *On understanding grammar*. New York: HarBraceJ.
- Gwaltney, J. 1986. *The dissenters: voices from contemporary America*. New York: Random House.
- Halliday, M. 1971. Linguistic function and literary style: an inquiry into the language of William Golding's *The inheritors*. *Literary style: a symposium*, ed. by S. Chatman. London: Oxford University Press. 330-368.
- _____, & Hasan, R. 1976. *Cohesion in English*. London: Longman.
- Hemingway, E. 1929. *A farewell to arms*. New York: Scribner's.
- Hunt, K. 1965. *Grammatical structures written at three grade levels*. Champaign: NCTE.
- Labov, W. 1972a. *Language in the inner city: studies in the black English vernacular*. Philadelphia: University of Pennsylvania Press.
- _____. 1972b. *Sociolinguistic patterns*. Philadelphia: University of Pennsylvania Press.
- _____, & Waletzky, J. 1967. Narrative analysis. *Essays on the verbal and visual arts*, ed. by J. Helm. Seattle: University of Washington Press. 12-44.
- Marquis, D. 1924. *The old soak's history of the world*. New York: Doubleday.
- Meyer, C. 1991. Telling the same story twice: aspects of the storage and expression of personal experiences. Eighteenth LACUS Forum.
- Mills, C. 1988. Lexical factors in the pragmatics of written English. *The fifteenth LACUS forum*. 506-514.
- _____. 1989. Did Shakespeare write "Shall I die? Shall I fly"? XLth Southeastern Conference on Linguistics (SECOL 40).
- _____. 1990. Syntax and the evaluation of college writing: a blind alley. *Language proficiency: defining, teaching, and testing*, ed. by L. Arena. New York: Plenum Press. Pp. 107-120.
- _____. 1991. Discourse, style, and measurement: narrative. Eighteenth LACUS Forum.
- Norusis, M. 1990. *SPSS base system user's guide*. Chicago: SPSS, INC.
- Page, E. 1966. The imminence of grading essays by computer. *Phi Delta Kappan* 47: 238-243.
- _____. 1968. The use of the computer in analyzing student essays. *International review of education* 14: 210-225.

- Pollard, C. & Sag, I. 1987. *Information-based syntax and semantics, Volume 1: Fundamentals*. Stanford: Center for the Study of Language and Information.
- Sebeok, T. (Ed.). 1960. *Style in language*. Cambridge, MA: MIT Press.
- Tannen, D. (Ed.). 1984. *Coherence in spoken and written discourse*. Norwood: Ablex.
- Terkel, S. 1972. *Working: people talk about what they do all day and how they feel about what they do*. New York: Random House.
- . 1980. *American dreams: lost and found*. New York: Random House.
- Toolan, M. 1990. *The stylistics of fiction: a literary-linguistic approach*. New York: Routledge.
- Wharton, E. 1924. *The old maid (the 'fifties)*. New York: Appleton.
- Winkler, K. 1992. A scholar's provocative query: was Huckleberry Finn black? *The chronicle of higher education*, 8 July: A6-A8.

DISCOURSE FUNCTIONS OF JUST

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The English particle just, in addition to functioning as a limiting or focusing adverb, meaning 'only', 'barely', 'exactly' or 'very recently', has a wide range of discourse or pragmatic functions as can be seen in the following sentences.

- (1) Just come right in.
- (2) Just what do you think you're doing?!
- (3) That's just wonderful!
- (4) I just don't understand you.
- (5) I just happened to be in the neighborhood.
- (6) If I just had your luck!
- (7) That just may be true.

The particle just can be referred to as a discourse or pragmatic particle when its main function, as in sentences (1) through (7), is either to indicate or hedge illocutionary force, to point to assumptions which a speaker makes about a listener or a situation, or to indicate a speaker's attitude or belief regarding her or his own utterance.

Although just is among the most frequently occurring of the English pragmatic particles, there has been very little descriptive research to date on its functions. That research which has been undertaken is mainly devoted to discussion of the historical development of just (see Cohen 1969), of the syntax of the scopal adverb just (see Brugmann 1986), or of the limitations of semantic models for dealing with words like just (see Lee 1987 and 1991). Studies dealing primarily with the pragmatic functions of just are for the most part contrastive analyses, for example of German and English particles (see Bublitz 1978 and Trömel-Plötz 1979). Most of this literature (see also Schubiger 1965 and 1980) concentrates on the other linguistic devices available in English for performing the same functions as pragmatic particles (for example, marked intonation patterns and tag questions). There has also been a great deal of research on pragmatic particles in other languages, particularly in German, where they are referred to as modal particles or Abtönungspartikeln (see, for example, Weydt et al 1983). However, more thorough descriptions of the functions of individual English pragmatic particles and discussions of English pragmatic particles as a set are required.

Discourse Functions of just. I propose to show here that just, as well as other English pragmatic particles, does indeed have a wide variety of pragmatic functions. I have looked at approximately 500 utterances from a variety of written and spoken texts in which just's function is primarily pragmatic (where just is not functioning mainly as a traditional adverb modifying individual words or phrases with the meanings 'only, barely, exactly, very recently').

I have categorized the occurrences of the pragmatic particle just according to its main discourse functions as it occurs in this data. The following broad categories for the discourse functions of just can be discerned: 1) As a determiner of illocutionary force, just marks an utterance as a wish or a threat. 2) As a strengthening particle just increases the impact of an utterance. 3) As a weakening particle just minimizes the impact of an utterance. 4) In addition, just implicitly points to speaker assumptions, attitudes, and beliefs regarding an utterance or the situation in which an utterance is spoken. Just may, for example, mark a proposition as a personal opinion, indicate a speaker's belief that something is likely, important, or relevant, or just may indicate a speaker's assumption that nothing more can or need be said about a proposition. The following connotations may also be lent to an utterance by the particle just in its many functions: politeness, rudeness, encouragement, impatience, hesitation, and spontaneity.

Determiner of illocutionary force. As a determiner of illocutionary force, just marks an utterance as a strong wish or desire (see 8).

(8) If I just had your luck!

Without the particle just this sentence would simply be a conditional clause.

Just in imperatives (see 9 and 10) or assertions (see 11) may also mark an utterance as a threat or a warning.

(9) Just you wait and see.

(10) Boy, if you think I'm scary, just wait'll you meet my cousin Eddie.

(11) You'd just better be on time.

Strengtheners. While marking utterances like (8) as expressions of desire and (9) through (11) as threats, just also strengthens the impact of these utterances on a listener. Just functions as a strengthener (also called upgraders or intensifiers), increasing the likely impact of an utterance, in other sentences as well, frequently in commands, requests, and suggestions.

(12) Just think!

(13) Just imagine what he must have thought.

(14) We weren't self-conscious about it. We'd just hoot

with delight when we suddenly thought of something silly we could do.

In commands and requests the speaker frequently indicates implicitly his or her expectation or even insistence that the command be carried out by a listener as in (15) through (17) below. An approximate paraphrase for just in these sentences might be: "I won't accept anything but immediate compliance".

(15) Just get in here!

(16) Could you just shut up for a change?

(17) Couldn't you just help me with this?

The propositional meaning of the adverb just may or may not also be conveyed when just functions as a strengthener. For example, in a sentence like Just sit down! the speaker may be expressing the equivalent of Sit down only (and do nothing else)! at the same time he or she is strengthening the impact of the command with just.

In addition to affecting illocutionary force, pragmatic particles like just can convey a wide range of information about assumptions regarding the speech situation in which an utterance occurs or the social relationship which exists between a speaker and a listener. In strengthening a command, request, or suggestion, just may therefore lend a variety of connotations to an utterance, depending on the context and intonation pattern of that utterance. For example, just may indicate annoyance, impatience, or frustration on the part of the speaker.

(18) Just hold your horses.

(19) Next time just, just decide what you're gonna do, right?

(20) When does the good part begin? Just sit back and watch, I told him. This is the good part.

By use of just a speaker may also indicate that he or she has more power or social status than the listener, so that the listener had better do as requested. Just therefore frequently conveys negative politeness on the part of a speaker.

Just may also indicate in questions an insistence that a specific answer be given because the expected response or an answer which has already been given is not acceptable or pleasing to the questioner.

(21) Just what do you think you're doing?

(22) Just what is your name?

With the appropriate intonation, just may also indicate that the speaker is annoyed at not having the answer to a question (see 23).

(23) Just where is that road map?

Weakeners. As a weakening particle (also referred to as illocutionary force hedges, downgraders, and downtoners) just has a function which is opposite to that of just the strengthener. The weakener just minimizes

the force or plays down the impact of a speech act on a listener. Just occurs most frequently as a weakener in precisely those speech act types which a speaker might want to temper so as not to run the risk of seeming threatening, imposing, or offensive toward a listener: commands, requests, suggestions, and refusals.

Just may minimize the impact of a request or command by limiting that which is required from the listener in order to fulfill the request or command. In the requests in (24) and (25) just minimizes that which is being requested much as the phrase "That's not too much to ask, is it?" would, indicating that granting the request should not be too great an imposition on the listener.

(24) Could you just lend me your car for a few minutes?

(25) Could you just answer that phone for me?

The propositional meaning of the adverb just 'only' may also be conveyed in these requests, so that just may also limit a word or phrase, for example just a few dollars (=only a few dollars) in (26) below.

(26) Could you just lend me a few dollars?

At the same time just has a minimizing effect on the impact of the whole utterance. However, in a sentence like Could you just help me here? (not equivalent to: Could you only help me here?) the primary function of just is as a weakening particle.

Just may also show that a speaker does not consider a request an imposition upon himself, as in (27), saving the face of the listener for whom something is being done.

(27) Uhm, what's the price now, eh, with V.A.T.? Do you know, eh?

Er, I'll just work that out for you.

Just may also minimize the impact of a request or a command by suggesting that an expected action is simple or very feasible and that a request or command is therefore easy to carry out (see 28).

(28) Free omelet! Just present this coupon and order two of our famous award-winning stuffed omelets.

Just may also show implicitly that a solution to a problem which is being offered is a surprisingly simple one or one easy to carry out and that the problem which is being solved should therefore not be of undue concern to a listener (see 29 through 31).

(29) 'What should I do? My son is constantly arguing with me.' 'Just don't worry about it.'

(30) 'A coyote's been muzzling in on mah sustenance.' 'Well, for heaven's sake! Why don't you just chase him off?'

(31) I'm kind of leery about phoning guys. My mama says, 'Just call them.'

By minimizing the impact of a command, request, or suggestion, just may bring connotations of reassurance or

encouragement to an utterance, particularly if that which is being commanded is of advantage to the listener (see 32 through 35).

(32) Just have a ball.

(33) Just go ahead and go on vacation.

(34) Next to push-ups (which, by the way, are just fine), the sit-up probably was the most commonly prescribed form of exercise for generations of youngsters.

(35) Just you wait and see. Everything will work out just the way I said it would.

Because of this function, just frequently marks the role of the speaker as that of advice-giver.

When just accompanies a refusal or a suggestion, it may be implied that the speaker has no choice but to refuse the listener something or offer a suggestion, thus softening the impact of the utterance on the listener. Sentences with just may give a sentence a tone of hesitancy or helplessness (as in 36 through 38).

(36) I'd just like to sort of show you that I don't like this type of thing.

(37) I'm just wondering if I could possibly back down on tomorrow.

(38) It's just the fact that well you know I'd got this date in my diary you know and I sort of...

Just in refusals may also indicate that the excuse given is the only one and that the speaker does not wish to inconvenience or offend the listener by his or her refusal (see 39 and 40).

(39) It's just that I need some time to myself once in a while.

(40) It's just that I already had two cups of coffee today.

Just may also minimize the importance of a proposition, making an action referred to seem more spontaneous or as though spoken only in passing (see 41 and 42). A paraphrase for this function of just might be: "I'm only doing this; don't read anything more into it".

(41) I'll just have a look to see who it is.

(42) I was just driving through the area and thought I'd stop by to tell you and Bobby that I did get the tickets to the state game.

Just also frequently diminishes the impact of questions (see 43), making them seem less direct and therefore more casual, spontaneous, or friendly.

(43) Just what was your name?

Just the weakener frequently indicates that a speaker has less power than a listener or wishes to diminish the impact of his/her greater power or status. Because it minimizes the force of an utterance on a listener, the weakening particle just is one of many

strategies used by speakers to indicate positive politeness. However, the weakener just can also convey negative politeness when the speaker's--and not the listener's--interests are being considered, often lending a tone of condescension and even rudeness to these sentences (44 and 45).

(44) Just don't you worry your pretty little head.

(45) Just don't worry about it. It's really none of your business.

Other Pragmatic Functions of just. In addition to functioning as a determiner, strengthener, and weakener of illocutionary force, just can have several other pragmatic functions (sometimes concurrently with its function as an indicator or hedge of illocutionary force) and convey a variety of connotations in addition to those already mentioned.

Emphasis. For example, just may indicate a speaker's emphasis, particularly on an adjective (see 46 and 47).

(46) That's just beautiful.

(47) The environmental benefits of recycling are just tremendous.

The implication in these sentences is that what is being conveyed is a personal opinion or a proposition gained from personal experience or perception, so that just in this function does not occur in objective expression of facts as, for example, the adverb very might. And just generally occurs with adjectives which indicate an extreme: 'That's just gorgeous' but not (with the same function) 'That's just nice'. Sentences with this emphasizing just are frequently used to indicate irony: 'Isn't that just great!'.

Relevance/Importance. Just may also mark a question as particularly relevant or important to a situation.

(48) Just where are my keys? [spoken while looking for the keys, for example]

Just may also indicate in such questions--often with the adverb again--that the answer being sought was at one time known to the speaker or should now be known to the speaker (see 49).

(49) Just what was his name (again)?

Likelihood. Just in statements with verbs of belief or possibility may also indicate that the speaker thinks an event is likely.

(50) I just know that the first time the police calls his parents, they are going to wonder where they went wrong - or why society is picking on their son.

Just in this function occurs frequently with the modal verbs may and might.

(51) That just may be.

(52) He just might come.

No other possibility, no change possible. *Just* may also indicate a speaker's belief that a situation cannot be changed or that it happens of its own accord.

(53) After my daughter was born, the extra weight *just* wouldn't seem to come off, and I was not willing to accept it.

(54) The system *just* doesn't have the discretion that it once had, and as the discretion went away, so did the opportunity for racial prejudice in the sentencing decision.

(55) That's *just* the way it goes.

Only One (or No Further) Explanation. *Just* may also indicate that what is being offered is the only explanation for something or the only comment forthcoming and may be paraphrased by "There's nothing more to say about it" or "There's no (other) explanation for it".

(56) I think that a lot of men *just* don't realize what goes on at school.

(57) 'Even when she's sound asleep, she thinks of me.'
'How can you tell?' 'I can *just* tell.'

Or *just* may simply indicate that no explanation for something is given. Brugmann (1986:50) writes about *just* in this function that it may mark "a proposition as a sufficient response".

(58) I *just* like Woody Allen.

(59) You don't lose one of your starters, whether he's 6-1 or 7-1, and not feel it, said Air Force coach Reggie Minton. That's *just* understood.

Conclusion. In this descriptive analysis of the pragmatic functions of *just*, I have listed the main functions of *just* occurring in the data gathered. The division of examples according to function is, of course, a simplification, since any single occurrence of *just* may have more than one of these pragmatic functions at the same time and convey any number of connotations.

This work is only a beginning. More descriptions of the functions of *just* are needed as are descriptions of the other English pragmatic particles. In addition, the distribution of functions among the set of English particles must be determined. The particle *just*, for example, has functions which overlap with those of several other particles (*simply*, *only*, *well*, *plain*, and *flat*). Like *just*, the particles *simply* and *only* also mark an utterance as a strong wish or desire (see (60) and (61)), although the use of *simply* and *only* frequently indicates that a negative outcome has already resulted, making expressions of wish into a lament or a reprimand.

(60) If he would *only* stay!

(61) If you'd *simply* stayed at home!

Like *just*, the particle *simply* also functions as a strengthening particle (see 63) and a weakener (see 64), although its impact on illocutionary force may not be as

great as that of just.

(63) Simply wait your turn!

(64) Send no money now, simply complete and mail the coupon at right.

Like just, simply may also indicate emphasis which is a personal opinion (see 65).

(65) So how was your little exercise in "father-son-bonding"? It was incredible, Andy, simply incredible.

Simply, plain, and flat may point to a speaker's belief that a situation cannot be changed or happens of its own accord (see 66 through 68).

(66) The man simply had no sense of direction.

(67) That boy's plain ornery.

(68) I flat don't understand it.

And when the particle well occurs with the modals may and might, it can also have a function similar to that of just: that of indicating likelihood or probability (see 69).

(69) That may well be.

Common features among pragmatic particles' homonymous adverbs and adjectives frequently reflect broad common semantic/pragmatic features. For example, just and simply indicate as adverbs a limitation or simplification and as weakeners of illocutionary force, they can be said to limit the impact of an utterance on a speaker. Likewise, the adverbs just, simply, plain, and flat all indicate a type of simplification and their counterparts among the pragmatic particles can indicate a perceived simplification of a situation by pointing to a speaker's belief that a situation cannot be changed or happens of its own accord. Further study of these common features may be of interest, as they may explain the historical development of particles or give a synchronic motivation for pragmatic particles with similar functions having homonymous adverbs with common semantic features.

Finally, in future research the role of sentence intonation and word stress as well as other co-textual linguistic cues which indicate the function of just in an utterance must also be considered, in particular cues which tell a listener when just is functioning as a strengthener and when it is functioning as a weakener.

Works Cited

- Brugmann, Claudia. 1986. "Sisterhood is More Powerful Than You Thought: Scopal Adverb Placement and Illocutionary Force". Papers from the Parasession on Pragmatics and Grammatical Theory at the Twenty-Second Regional Meeting, Chicago Linguistics Society. Chicago: Chicago Linguistics Society, 40-53.
- Bublitz, Wolfram. 1978. Ausdrucksweisen der Sprecher-einstellung im Deutschen und Englischen. Tübingen: Max Niemeyer Verlag.
- Cohen, Gerald. 1969. "How Did the English Word 'just' Acquire its Different Meanings?". Papers from the Fifth Regional Meeting, Chicago Linguistic Society. Chicago: Chicago Linguistic Society, 25-29.
- Lee, David. 1987. "The Semantics of *just*". Journal of Pragmatics 11/3, 377-398.
- _____. 1991. "Categories in the description of *just*". Lingua 893, 43-66.
- Schubiger, Maria. 1965. "English Intonation and German Modal Particles--A Comparative Study". Phonetica, 12:2, 65-84.
- _____. 1980. "English Intonation and German Modal Particles II: A Comparative Study". In: Linda R. Waugh and C. H. van Schooneveld, eds., The Melody of the Language: Intonation and Prosody. Baltimore: University Park Press, 279-98.
- Trömel-Plötz, Senta. 1979. "'Männer sind eben so': Eine linguistische Beschreibung von Modalpartikeln aufgezeigt an der Analyse von dt. *eben* und engl. *just*". In: Harald Weydt, ed. Die Partikeln der deutschen Sprache. Berlin: Walter de Gruyter, 318-34.
- Weydt, Harald, Theo Harden, Elke Hentschel, and Dietmar Rösler. 1983. Kleine deutsche Partikellehre. Stuttgart: Ernst Klett.

EXPRESSIVITY AND THE NATURE OF TEXTUAL
RHETORIC: CROSS-CULTURAL TEXT EVIDENCE
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1. Introduction

Arguing for a rapprochement between Pragmatics and the traditional discipline of rhetoric, Leech (1983) has put forward an interesting proposal as to the way different kinds of pragmatic principles bear on text building concerns. Patterns of language use at the text level may be succinctly accounted for, Leech argues, as the surface correlates of two broad sets of pragmatic principles, those aiming at the building of a processible text (Processibility, "be processible", Clarity, "be clear", Economy, "be brief") and those directed toward the creation of an interesting story (Expressivity, "be expressive"). These principles, along with their associated maxims (including the Gricean maxims), are taken to build a system, referred to as 'textual rhetoric', which may be variously implemented by language producers: principles may apply differently at different contexts, compete with each other, or be exploited for the purpose of implicature.

Though not quite developed into its finest details, Leech's proposal constitutes a significant advance over alternative suggestions documented in the psycholinguistic literature (Clark and Clark, 1977; Prideaux, 1991) as it succeeds in rendering different principles intelligible by way of conceptualizing them as constituents of a single system. In earlier papers, however (Kostouli, 1992a,b), I raised the need for a better articulated conception of textual rhetoric. I have illustrated in this regard that the understanding of the nature of textual rhetoric is contingent upon clarifying matters pertaining to the procedures by which tensions between its constituent principles get resolved and internal order is restored in the system. As a result, Leech's conception of textual rhetoric has been revised to encompass two kinds of principles, first- and higher-order principles: while tensions do arise within textual rhetoric, these are presented to be limited to first-order principles (which are, basically, principles of informativeness); such tensions are postulated to be resolved by higher-order principles (these specify the goals narrators aim to

pursue at the text level). Building on this background, in this paper, I set out to illustrate the role of aesthetic concerns in text production, captured by Leech in the principle of Expressivity. Relevant research has attested to their reality; indeed, Expressivity is regarded to be the highest goal narrators are expected to attain while producing a narrative, informing a wide range of strategies, generally subsumed under the labels of 'internal' and 'external evaluation' (Labov and Waletzky, 1967, Tannen, 1980, 1989).

Although the discussion below bears out this basic line of argument, it gradually emerges that the nature of Expressivity is more complex than suggested thus far. Using as evidence patterns of event linkage in Greek and American narratives, I illustrate the role and working of Expressivity in giving rise to event linking strategies (such as preposed adverbial clauses). Interestingly, differences were noted between the two cultures with regard to their conceptualization of Expressivity: while American narrators seem to equate a tellable narrative with that of a processible text, for the Greek narrators, Expressivity seems to consist of bringing about two distinct, yet interlocking, requirements, the need to signal the thematic structure of the text and that of differentiating the kind of information imparted to the reader. By investigating the patterns of event linkage in the collected texts along with readers' responses, I contend that Expressivity is, in fact, a composite principle, consisting of a culture-specific combination of first- and higher-order principles. The discussion below attests relevant evidence that helps me substantiate this contention.

2. The data

The data consist of elicited narratives written by Greek and American narrators. To ascertain comparable samples, university students were used as subjects. Subjects were presented with picture sequences depicting a story and were asked to write the story for a friend who could not see the pictures. In this paper, I analyse 48 texts (30 Greek, 18 American) written on the basis of a picture sequence consisting of nine frames. After tracing the event line (i.e. differentiating predicates into those that move versus stall temporal movement), the forms used for event linkage were documented, subsumed under the following categories:

Semantically minimal forms: this includes "and"/"kai" and zero connectives (no explicit indication of linkage).

Semantically rich forms: including: (i) conjunctions and adverbial connectives: here I include adversative conjunctions ("but"/"alla"), temporal connectives ("otan"/"when", "while", "kai meta"/"and then") and causal conjunctions ("so"). (ii) temporal expressions: here I include expressions such as "after that", "subsequently", "sti synecheia" (afterwards).

The textual distribution of the documented forms bears out relevant suggestions in the literature as to the role of topicality management concerns in text building. As stated in Givon's (1983:18) Iconicity principle, "the more disruptive, surprising, discontinuous, or hard to process a topic is, the more coding material should be accessible to it". This correlation is indeed borne out by the data: the semantically rich forms were found to be predominantly used at points of episode change (these correlate with changes in character, spatial, and temporal continuity) - the semantically minimal forms at points of episode continuity. Table 1 documents the results. Little attention to the findings, however, suggests a more complicating picture: semantically rich forms were also found to be used within episodes; in fact, differences were documented between the two groups as to the type of semantically rich forms used within episodes, preposed adverbial clauses (Greek narrators) versus connectives (American narrators). The discussion below illustrates the findings.

Position	Semantically rich		Semantically minimal	
	Greek	American	Greek	American
episode initial	51.1%	51.85%	48.8%	48.1%
within episodes	18.6%	16.53%	81.39%	83.46%

Table 1: The textual distribution of event linking forms in Greek and American texts

I. Cross-cultural similarities

- (1) a. Ø She went inside to get cleaned up
- b. and took a bath.

- | | |
|------------------------------|-------------------------------|
| (2) a. Ø Pigainei sto banio | a. Ø She goes to the bathroom |
| b. Ø vgazei ta roucha tis | b. Ø takes off her clothes |
| c. kai archizei na planetai. | c. and begins to wash herself |

(1) and (2) illustrate the typical pattern of event linkage within episodes: the use of semantically minimal forms ("and", "kai", or zero connectives).

- (3) a. Wendy went into the bathroom and took a bath to wash herself because the paints spilled all over the dress.
 b. *While Wendy was in the bathroom*, Bob and Julie clean up the paints...

- (4)
- | | |
|---|--|
| a. I mama....vgainei kai pali
exo | ...Mom..... goes back
outside |
| b. Synchronos omos kai ta
paidia.... | But the kids in the
meantime.... |
| c. <i>Otan</i> i mama vgike exo
ta vrike ola etoima... | <i>When</i> mom went back
outside she found |

(3) and (4) instantiate a cross-cultural similarity: the use of preposed adverbial clauses at episode initial points. Such clauses were found not to advance the narrative event line (their predicates such as the one in [4], contain given information)¹ and are used primarily as cohesive devices, to establish linkage between (i) two different episodes presenting the activities of different sets of characters (as in [3]) or (ii) between two not immediately adjacent episodes interrelating the activities of the same character, as in (4). In the latter case, the temporal connectives (such as 'otan' (when) in 4 above) serve as anaphoric and cataphoric pointers within the text. These findings corroborate relevant suggestions reported in the literature (Chafe, 1984; Longacre and Thompson, 1985).

II. Cross-cultural differences

(5) and (6) instantiate the standard pattern of event linkage in the Greek texts: the use of preposed adverbial clauses within episodes.

(5)

- | | |
|--|--|
| a. S'afto to diastima i Anna
finished her bath | During that time Anna
teleiose to banio tis |
| b. kai <i>afou</i> forese ena
katharo forema vgike exo. | and <i>after</i> she put on a clean
dress she went out. |

(6)

- | | |
|---|--|
| a. Ta dyo paidia prosferan mia
omorfi anthodezmi os
endeixi metanoias. | The two kids offered her
bunch of pretty flowers
as an apology. |
| b. <i>Afou</i> agkaliastikan
yposchrthikan perissoteri
prosochi sto mellon. | <i>After</i> they hugged each
other, they promised to
be more careful in the |

In both (5) and (6), the documented preposed adverbial clauses tend to appear within episodes at points where a subtle change in continuity occurs (such as change in the type of action). Their role is worth noting: contrary to the cases discussed above (see [3] and [4]), the preposed adverbial clauses used within episodes were found to contain new information; their predicates are located on the event line and serve to advance the temporal movement.

Compare (5) and (6) with (7) and (8), instantiating the typical way adopted by American narrators for establishing event linkage within episodes: use of connectives or semantically minimal forms.

(7)

John felt bad and cleaned up
and gave Ann flowers.
Ø She forgave him
and gave him a hug.

(8)

She felt better right away.
Then Michael handed her
pretty roses.
She felt even better.....

In what follows, I develop an account that would do justice to the cross-cultural evidence, i.e. be sensitive to the variety of the forms documented in the data and bear out the distinct textual function of preposed adverbial clauses while, incorporating, at the same time, readers' comments: when asked to comment on the texts, readers used subordination to draw conclusions on the linguistic skills of the writer and the quality of the text.

3. Accounting for the findings

In light of the empirical evidence, I now proceed to illustrate the nature and number of the principles giving rise to the documented cross-cultural strategies of event linkage. To account for the data, I basically follow Horn (1989) (relevant insights are also taken from Levinson, 1987) in advocating a twofold set of information-related forces, the Quantity and the Informativeness principles, capturing two distinct types of economy, semantic/surface form maximization and semantic/surface form minimization, respectively. The two principles read thus: *The Quantity principle*: "be prolix"/ "give the reader as much information as is required" - *The Informativeness principle*: "be brief"/ "do not give the reader more information than is required". The Quantity principle (hereafter the Q-principle) is basically a hearer-based principle which favours semantic specificity and prolixity of expression. This is counter-balanced by the Informativeness principle (hereafter the I-principle), a speaker-based drive, favouring minimization, that is, the use of forms that are semantically general and, in terms of surface structure, brief.

Given these preliminaries, I proceed to my account proper and suggest the following. First, the documented patterns of event linkage may be succinctly accounted for as the surface correlates of the two principles of informativeness: whereas the semantically rich forms point to a strategy that constitutes the instantiation of the Q-principle - the semantically empty forms point to a different strategy which is the surface application of the I-principle. Second, tensions (i.e. situations of choice) necessarily arise as language producers have to make a choice between different text strategies (i.e. essentially between opposing informational requirements). Apparently, the need for a weighting process arises. However, the two principles at odds, the Q- and the I-principles, do not seem to provide the analyst with any insight into the factors conditioning the resolution of their tension. While undoubtedly several factors may be attested as instrumental, I take it that, in producing a narrative, the general and uncontested goal of the narrator is to create an interesting story. Leech has captured these aesthetic or expressive requirements in the form of a principle, the principle of Expressivity.

Formulated as it is, Leech's proposal suggests a direct relation between the use of specific forms and Expressivity. Arguing

against this, I claim for the need of introducing a distinction between two types of principles, first- and higher-order principles. Indeed, I contend that Expressivity may not be appreciated unless examined in relation to the Q- and the I-principles: these three principles present the language producer with a distinct, though interrelated, set of requirements. Note the differences: Expressivity refers to a goal language producers are expected to pursue at the text level (i.e. create an interesting story), the Q- and the I-principles specify the means or strategies one could use in order to attain this goal. These suggestions have important effects on the structure of textual rhetoric. Restating them in theoretical terms, I suggest that within textual rhetoric, Expressivity should be conceptualized of as a higher-order principle against which the injunctions of the Q- and the I-principles (conceptualized as first-order principles) may be weighted leading to the selection of specific strategies. This line of reasoning, however, seems too vague to be illuminating: Expressivity, as a higher-order principle, is of quite general nature to inform the selection of specific strategies. To this end, it is deemed necessary that intermediate level principles be postulated, presenting the narrator with concrete goals against which the Q- and the I-principles may be weighted. Two such goals are presented below, the need to establish thematic continuity ('Topical Relevance') and the need of indicating the centrality or importance of the narrated events ('Grounding'). After presenting them separately, the discussion integrates the various threads to illustrate how these two requirements relate to each other to bring about Expressivity.

3.1. Expressivity and Relevance: Cross-cultural similarities

In light of the findings reported in Table 1, it becomes clear that language producers in deciding about the amount of information to be imparted to the reader take into account contextual characteristics (i.e. changes in spatial, temporal continuity, and type of action), and that our account, in order to be plausible, would need to incorporate the role of such concerns in the decision-making. But how would such factors be conceptualized in textual rhetoric? It is with regard to this issue that I come to the crux of my proposal regarding the nature and number of the principles to be postulated as involved in text building. Specifically, I suggest that the tension between the Q- and the I-principles is resolved by language producers weighting their requirements not against each other but rather against the injunctions of a higher-order principle capturing topicality management concerns. I call this the principle of "Topical Relevance" and

conceptualize it as a higher-order principle instructing the language producer to "signal the thematic structure of the text" (for further definitions, see Berg, 1991; Blass, 1990, van Dijk, 1979). In processing terms, I take it that the principle of Relevance is instrumental for the construction of a text representation and, ultimately, of a discourse model. According to this account, then, the use of semantically rich forms (such as preposed adverbial clauses) at episode-initial points seems to be the outcome of a decision-making procedure undertaken by the language producer as to the amount of information to be imparted to the reader. Consequently, the cross-cultural similarities in the event linking strategies used across episodes may be succinctly conceptualized of arising out of essentially the same set of principles: Greek and American narrators seem to assign similar orders of priority to the Q- and the I-principles at points of episode change.

3.2. Cross-cultural differences: Expressivity, Relevance, and Grounding.

The argument, as developed in 3.1., however plausible, does not seem to encompass the reasons for the use of preposed adverbial clauses within episodes. Relevance concerns may indeed be at work: although the need for signalling the thematic structure of the text most prominently surfaces at points of episode change, some language producers deemed it necessary to use explicit information (connectives and adverbial clauses) even within episodes (i.e. at points where subtle changes in discontinuity occur). Regarding the types of semantically rich forms used, the following need to be noted: Americans used 100% connectives (i.e. conjunctions and temporal expressions); for the Greek narrators, the findings are: 41.07% preposed adverbial clauses and 58.9 % connectives. For my account to be adequate, the principles necessitating the selection of preposed adverbial clauses over connectives need to be illuminated. I contend that the factors involved in this selection process (this is specific to Greek narrators) should not be located at the level of the two first-order principles; further, Relevance cannot be the instrumental higher-order principle in the case at hand. A different principle needs to be postulated.

A number of proposals have been put forward regarding the best way of conceptualizing the contribution of temporal adverbial clauses to text quality, all of which tend to relate them to the foreground - background distinction. Thus, according to Labov and Waletzky (1967) (see also Hopper and Thompson, 1980; Dry, 1983; Reinhart,

1984) preposed subordinate clauses are used to express background information. This type of argument conceptualizing foreground and background as a discrete, binary concept rendering sequentiality and non-sequentiality respectively, has been found to be seriously flawed (Thompson, 1987). Additionally, the evidence in the data (see (5) and (6) above) would argue against the plausibility of correlations of this sort. Alternatively, it might be argued that temporal adverbial clauses are associated with material of low importance, i.e. material which is not essential to plot development whereas main clauses contain important material (see). The main difficulty associated with this proposal lies in the meaning attributed to the terms 'important' versus 'non-important' material, both of which seem to indicate relative concepts. Although diversions and details may not, at first glance, constitute plot-advancing material, they are, undoubtedly, necessary for the creation of an interesting story. It is evident that none of the above binary correlations is adequate enough for capturing the role of preposed adverbial clauses within texts (for more discussion on the issue, see Fleischman, 1990).

To break this vicious circle, let me begin by focusing on the data. Apparently, when compared to connectives, preposed adverbial clauses constitute the marked or prolix forms (as such, the instantiation of the Q-principle): connectives are the brief, the unmarked forms (the instantiation of the I-principle)². As I argued above, for narrators to use a more prolix form (which is a hearer-rather than a speaker-based choice) whereas a brief form would be equally plausible, the marked forms must help the narrator attain a goal the brief forms cannot. This is the case under examination. It is my contention that the preposed adverbial clauses help the narrator signal the centrality or importance of the events narrated. Indeed, as Thompson (1987) has aptly argued, it is this differentiation that helps transform a monotonous series of events into an interesting story. To capture the need for differentiation within textual rhetoric, I postulate a principle which I call the principle of Grounding, and conceptualize it as a higher-order principle instructing the reader 'to differentiate levels of informational importance within the text'. As a scalar notion, Grounding acknowledges that various types of information may exist in a text (events, descriptions, details), each with each own devices for foregrounding and all intertwined. The picture that emerges seems to be more complex than the one suggested thus far. Although I still acknowledge a distinction between two types of material within a narrative, that is, sequential and non-sequential material (these are conceived of as separate

discourse categories which may interrelate in various ways), I proceed further to argue (in line with Fleischman, 1990) that the sequential material, the event line itself, should be construed of as a separate discourse category, with its own devices for differentiation. Building upon this, I claim that preposed adverbial clauses are one of the forms narrators may employ to differentiate types of events: they help the narrator signal his perception of the events as salient versus less salient.³ (see also Bakker, 1991). This task cannot possibly be attained by the use of connectives: connectives attain Relevance (i.e. indicate the thematic structure of the text by signalling points of discontinuity) but not Grounding. Summarized, the structure of principles may be sketched thus:

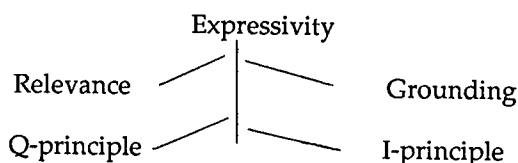


Figure 1: The role of Expressivity within textual rhetoric

In light of Figure 1, it appears that although Expressivity constitutes the highest goal pursued by Greek and American narrators alike, the details of its nature and working are not as straightforward as assumed thus far. The patterns of language use may now be adequately accounted for. First, the similarities in the event-linking forms seem to be the outcome of similar orders of priority assigned to the Q- and the I-principles, in tension. The differences in the event-linking forms are shown to concern the nature and number of higher-order principles used in the resolution of tensions between first-order principles, i.e. Relevance versus Grounding.

Notes

1. Various definitions have been given of the terms 'given' and 'new' information. I define 'given' information as information that is overtly or anaphorically available from the preceding discourse. See Prideaux (forthcoming) for further criteria.

2. The classification of forms as marked or unmarked is not intrinsic to the forms themselves but depends on higher-order principles. According to this account, then, connectives are marked forms compared to zero forms as they help the narrator attain Relevance

(which zero forms cannot). However, viewed against Grounding, connectives qualify only as brief, unmarked forms as they do not help the narrator attain Grounding.

3. I claim that the assignment of relative importance to events is primarily a subjective process: the narrator him/herself decides which events merit highlighting and which do not. As Fleischman (1990) has argued, we cannot assume cross-cultural unanimity about what is interesting or important and therefore intrinsically foregroundable. It is the task of a further paper to illustrate how Grounding works to give rise to yet further kinds of differentiation, such as use of descriptive material within the complicating action, use of orientation and coda, etc.

References

- Bakker, Egbert J., 1991. Foregrounding and indirect discourse: Temporal subclauses in a Herodotean short story. *Journal of Pragmatics* 16: 225-247.
- Berg, Jonathan, 1991. The relevant relevance. *Journal of Pragmatics* 16: 411-25.
- Blass, Regina, 1990. *Relevance Relations in Discourse: A Study with Special Reference to Sissala*. Cambridge: CUP.
- Chafe, Wallace L. 1984. How people use adverbial clauses. In *Proceedings of the Tenth annual meeting of the Berkeley Linguistic Society*, C. Brugmann and M. Macaulay (eds.), 437-449.
- Dry, Helen, 1983. The movement of narrative time. *Journal of Literary Semantics* 12: 19-53.
- Fleischman, Suzanne, 1990. *Tense and Narrativity: From Medieval Performance to Modern Fiction*. Austin: University of Texas Press.
- Givon, Talmy, ed., 1983. *Topic Continuity in Discourse: A Quantitative Cross-language Study*. Amsterdam: Benjamins.
- Hopper, Paul J., and S.A. Thompson eds. 1982. *Studies in Transitivity*. New York: Academic Press.
- Horn, Lawrence R., 1989. *A natural theory of negation*. Chicago: Chicago University Press.
- Kostouli, Triantafillia, 1992, to appear. On the structure of textual rhetoric: Some evidence from Greek narratives. *Text* 12 (3).
- Kostouli, 1992b (forthcoming). Processing principles and textual rhetoric: Text evidence on their relation.
- Labov, William and J. Waletzky, 1967. Narrative analysis: Oral version of personal experience. In *Essays on the Verbal and Visual Arts*, J. Helm (ed.), 12-44. Seattle: University of Washington Press.

- Leech, Geoffrey, 1983. *Principles of Pragmatics*. London: Longman.
- Levinson, Stephen C., 1987. Pragmatics and the grammar of anaphora: a partial pragmatic reduction of binding and control phenomena. *Journal of Linguistics* 23: 379-434.
- Longacre, R.E. and S.A. Thompson, 1985. Adverbial clauses. In *Linguistic Typology and Syntactic Description*, T. Shopen (ed.), 171-234. Cambridge: CUP.
- Prideaux, Gary D., 1991. Syntactic form and textual rhetoric: The cognitive basis for certain pragmatic principles. *Journal of Pragmatics* 16: 113-129.
- Prideaux, Gary D., forthcoming. Subordination and information distribution in oral and written narratives. In *Discourse and Pragmatics*
- Reinhart, Tanya, 1984. Principles of gestalt perception in the temporal organization of narrative texts. *Linguistics* 22: 779-809.
- Tannen, Deborah, 1980. A comparative analysis of oral narrative strategies: Athenian Greek and American English. In W.L. Chafe, (ed.), 51-87. *The Pear Stories: Cognitive, Cultural, and Linguistic Aspects of Narrative Production*. Norwood, NJ: Ablex.
- Tannen, Deborah, 1989. *Talking Voices: Repetition, Dialogue, and Imagery in Conversational Discourse*. Cambridge: CUP.
- Thompson, S., 1987. 'Subordination' and narrative event structure. In *Coherence and Grounding in Discourse*, R.S. Tomlin (ed.), 435-454. Amsterdam: Benjamins.
- van Dijk, Teun A., 1979. Relevance assignment in discourse comprehension. *Discourse Processes* 2: 113-26.

SPOKEN DISCOURSE

FIRSTHAND AND SECONDHAND NARRATIVES: DIFFERENCES IN THE TELLING

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Introduction¹

It is well-attested that great differences exist between narratives told by those who have had direct experience of the events related and those who have only heard of the events secondhand. For example, the contents of the secondhand version may be less elaborated and attentive to detail than firsthand versions, while at the same time secondhand versions might "fill in" information by virtue of inferences the speakers have drawn, quite independent of the actual events viewed. For example, Hasher and Griffin (1978), in contrasting a "reconstruction" versus "reproduction" account of recall, find that differences in what is asked of subjects influences the type of recall, while Owens, Bower, and Black (1979) found that attention to the "motive" of individuals and events being recalled interferes with accurate recollection of details, although it enhances the connection of otherwise disparate components of the events recalled.

This paper explores some of the differences between firsthand and secondhand narratives within the context of a controlled experiment. In particular, a set of firsthand narratives was collected from 40 participants who watched a short movie clip and then produced an oral narrative of the events in the clip to a friend. The 40 friends then independently retold the story they had just heard to a tape recorder. The similarities and differences in the contents and forms of the two sets of narratives were then analyzed. It was found that while the secondhand versions were significantly shorter and more condensed, with fewer events actually related, there were at the same time remarkable similarities in the two versions.

The Issues

The present study constitutes a small portion of a much larger project undertaken to investigate two types of factors which appear to be operative in structuring the form and content of narrative discourse: social factors (gender of speaker and hearer, degree of intimacy between speaker and hearer, first- or secondhand knowledge) and cognitive and processing constraints (information distribution, closure, iconicity, markedness, foregrounding).

One goal of the present study was to examine the differences, if any, in the way men and women structure narratives as a function of the addressee (same or different sex, friend or stranger, firsthand or secondhand telling). A second goal was to examine the communalities in oral narratives which derive from our common cognitive architecture, with its associated processing, storage, and retrieval facets.

In the present discussion, attention will be focused on the differences found between the firsthand and secondhand narratives. For our immediate purposes here, what is of importance is how the firsthand and secondhand narratives differed, and the extent to which those differences can be accounted for by either processing or social factors. The differences will be analyzed in terms of four types of factors: (1) the relative lengths of the narratives (as measured by numbers of words, clauses, and other salient factors), (2) the operation of selected cognitive processing constraints, (3) the contents of the narratives (as indicated by the specifics of the events mentioned in each condition), and (4) the gender of the speaker (and hearer).

Prior to a discussion of the features which were found to distinguish firsthand from secondhand narratives, however, a short description is in order of how the overall project was carried out.

The Experiment

The methodology employed in the project is a variant on that used so successfully by Chafe (1980) and his colleagues. Participants (all of whom were paid) were invited to come in pairs to the experiment. One member of each pair watched a short film clip (taken from the movie *Adam's Rib*), after which he or she then narrated the events in the movie both to the friend and to a stranger (with the order of narration balanced so that in half the cases the narration was first to the friend, and in the other half, first to the stranger). The original viewer was asked to provide a narrative (the "firsthand" narrative) with adequate information such that his/her friend would be able to have a clear enough understanding of what had taken place so that he/she could then repeat the story into a tape recorder with enough detail to cover all the relevant events (the "secondhand" telling). In all, 43 pairs of subjects participated in the study, but due to technical problems, data from three pairs had to be eliminated.

The 40 remaining pairs were partitioned into four groups of ten pairs each: males who brought male friends (MMF), females with female friends (FFf), males with female friends (MFf), and females with male friends (FMf). In each instance, the first member of the pair saw the film and then narrated its contents to the friend or a stranger. With the permission of all the participants, the narratives were then all taped and later transcribed and analyzed for a variety of factors.

Since much in our popular culture suggests that men and women talk differently and use different kinds of structures, including greater or fewer pauses and hedges, etc., each narrative was analyzed in terms of the number of words, number and type of clauses (main and subordinate), pauses, hedges, and a variety of other factors. Moreover, detailed analyses were carried out of the types of relative clauses and adverbial clauses used, including tabulations of their locations within the host clauses and their information content.

In addition to the analyses of the individual narratives, an "episode analysis" was carried out on the stimulus material itself, in which the short film clip was independently analyzed in terms of the specific actions which took place in it. This was done in order to provide a kind of independent template against which the various narratives could be assessed. In this analysis, nine major episodes were isolated in the film clip, with a shift of camera (sometimes a major shift) marking the boundary of each episode. The nine macro-events or major *episodes* are (with the number of specific events in each indicated by the number in parentheses):

- E1 the woman massages the man (4)
- E2 they switch places (3)
- E3 the man massages the woman (8)
- E4 the woman gets upset (3)
- E5 they argue (2)
- E6 she cries (4)
- E7 he exits (2)
- E8 he returns (3)
- E9 she exits (3).

In short, the study examined both the formal structures and the contents of the firsthand and secondhand narratives, with appropriate controls and balances in terms of gender of speaker and addressee. In total, some 120 oral narratives were collected, transcribed, tabulated, and analyzed. Of these, 40 were told to friends, 40 to strangers, and 40 "secondhand" narratives were told by the friends to a tape recorder. It is the differences between the firsthand and secondhand narratives which are the focus of our attention.

Results

The results of the study can be best approached if they are partitioned into four general categories mentioned above, those associated with (1) gross measures of length (numbers of words, clauses, hedges, pauses, etc.), (2) with differences resulting from differential use of selected cognitive processing principles, (3) with differences in content (events of the film actually mentioned in each group), and (4) with gender differences. Each

of these sets of results, while not entirely independent, will be dealt with in turn.

Length of narratives. In general, as might have been expected, firsthand narratives tended to be longer and more detailed than the secondhand narratives. An analysis of firsthand narratives among friends revealed that same-sex dyads are significantly wordier than cross-sex dyads, in terms of total words used as well as in terms of the numbers of main clauses used. No differences were found between friends in the relative frequencies of subordinate clauses, pauses, or hedges used. An examination of the differences between narratives told to friends and those told to strangers revealed that both men and women use more words and clauses with friends than with strangers, but again, the numbers of pauses and hedges does not differ.

We now turn to the differences between firsthand and secondhand narratives as measured by these general length factors. From Table 1, which summarizes these results, it can be seen that there is a significant difference between firsthand and secondhand narratives in the relative frequencies of words, main and subordinate clauses used in the two conditions. In all cases, firsthand narratives are longer and, if the numbers of clauses can be taken to indicate some rough measure of overall information density, they are also apparently more informative. These differences are all statistically significant (χ^2 -tests for all pairs of words, main and subordinate clauses yield significances of $p < .0001$ for all cases).

Table 1. Firsthand and Secondhand Length Measures

Condition	Words	Average				
		MC	SC	P	H	W/C
<u>Firsthand</u> (20 each)						
F-Friend	545.3	53.7	36.7	18.4	6.4	6.0
F-Stranger	463.4	45.9	34.4	16.3	6.2	5.8
M-Friend	649.3	60.4	43.5	20.0	8.5	6.3
M-Stranger	494.3	43.9	37.6	17.8	6.5	6.2
<u>Secondhand</u> (20 each)						
F-Tape Recorder	329.7	29.5	21.8	19.9	3.2	6.3
M-Tape Recorder	292.9	26.3	22.0	15.5	3.0	5.9

 F: female narrator MC: main clause P: pause
 M: male narrator SC: sub. clause H: hedge

There is, however, no significant difference between the numbers of pauses or hedges used in any of the conditions, and the number of words per clause remains remarkably constant across all conditions. These results suggest that pauses, hedges, and words per clause are not subject to the social constraints and conditions governing the information content or density, but are rather a function of actual processing constraints.

Cognitive (Processing) Constraints. Here an investigation was made into the relative functions of the closure and given-new constraints (Brown & Yule, 1983; Clark & Clark, 1977; Clark & Haviland, 1977; Prideaux, 1991; Prince, 1981) as represented in the location and information content of restrictive relative clauses in the narratives. Closure would predict that more relative clauses should be attached to final NPs than to medial ones, while the given-new constraint predicts that in general relative clauses should encode given information more often than new. The impact of both of these factors was investigated for both the firsthand and secondhand narratives.

It was found that closure is highly salient in both forms of the narratives, with significantly more relative clauses attached to final than to medial NPs. However, the given-new results are somewhat different, since in both firsthand and secondhand narratives a mix was found of given and new relative clauses. What is of primary interest here is the consistent pattern of attaching given relative clauses to definite NPs and new relative clauses to indefinite NPs. Such a result, of course, makes obvious sense once it is realized that definite NPs tend to code given (previously mentioned or activated) referents (Givón, 1979; Chafe, 1987; Fox & Thompson, 1990), while indefinite NPs tend to code novel referents. The results of these tabulations and the tests for the two constraints are found in Table 2.

Table 2. Closure and Given-New Results

CONSTRAINT	FIRSTHAND	SECONDHAND																								
CLOSURE	Medial=27; Final =135 $\chi^2 = 72.0, p < .001$	Medial=15; Final=77 $\chi^2 = 41.8, p < .001$																								
GIVEN-NEW	<table> <tr> <th></th><th>DEF</th><th>INDEF</th></tr> <tr> <td>G</td><td>46</td><td>1</td></tr> <tr> <td>N</td><td>17</td><td>98</td></tr> <tr> <td>χ^2</td><td colspan="2">= 96.9, $p < .001$</td></tr> </table>		DEF	INDEF	G	46	1	N	17	98	χ^2	= 96.9, $p < .001$		<table> <tr> <th></th><th>DEF</th><th>INDEF</th></tr> <tr> <td>G</td><td>20</td><td>2</td></tr> <tr> <td>N</td><td>3</td><td>67</td></tr> <tr> <td>χ^2</td><td colspan="2">= 66.9, $p < .001$</td></tr> </table>		DEF	INDEF	G	20	2	N	3	67	χ^2	= 66.9, $p < .001$	
	DEF	INDEF																								
G	46	1																								
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	DEF	INDEF																								
G	20	2																								
N	3	67																								
χ^2	= 66.9, $p < .001$																									

While the firsthand and secondhand narratives differ in the total frequencies of relative clauses, their relative distributions in the two conditions do not differ significantly.

In both forms of narrative, closure plays a highly significant role, as does a revised version of the given-new constraint which states that given modificational information is paired with previously mentioned referents, and new modificational information with new referents.

Episode analysis. As discussed above, an episode analysis revealed nine distinct macro-events, each with two or more sub-events. In order to determine which events within the film clip were considered by the narrators to be the most salient and important, each narrative was examined in detail, and a tabulation was made of which specific events were mentioned in each. The criterion was adopted that if a particular event was mentioned 70% of the time or more, that event was operationally defined as a *major event*. The resulting set of major events for each dyad type is found in Table 3.

Table 3. Major Events

Dyad	E1				E2				E3				E4				E5				E6				E7				E8				E9			
	0	1	2	3	4	0	1	2	3	4	5	6	7	8	0	1	2	3	0	1	2	0	1	2	3	4	0	1	2	0	1	2	3	0	1	2
Fwf	*	*									*	*	*	*	*					*														*		
Fff	*	*	*		*			*	*				*	*						*		*	*											*		
FS	*	*		*									*	*	*	*				*		*												*		
FT	*	*											*	*		*				*		*				*								*		
Mwf	*	*											*	*						*		*												*		
Mff	*	*		*									*	*						*		*												*		
MS	*	*											*	*						*		*												*		
MT	*	*		*									*																							
PP (all)	#	#											#	#						#													#			
PT (all)	#	#											#																							

PP: person to person *: 70% or greater mention
 PT: person to tape recorder #: 100% mention

These results reveal that the following events are judged as major in all cases of firsthand narratives, regardless of the gender of the speaker.

- E1.0 the woman is massaging the man
- E1.2 she slaps his backside
- E3.7 he slaps her backside hard
- E4.0 she gets upset
- E6.2 she starts to cry
- E9.2 she kicks his shin

As Table 3 reveals, relatively fewer details are mentioned in the secondhand narratives, however. In other words, in the secondhand narratives there is far less information related, especially information which occurs toward the end of the story. Such a result accords with the result mentioned above that secondhand narratives are less wordy and informative than firsthand ones.

Gender Differences. It has already been pointed out that when talking with friends of the same sex, both men and women are somewhat wordier than when talking with friends of the opposite sex. However, other interesting gender effects also emerge, especially in terms of the contents of the narratives.

From Table 3 it can be seen that females tend in general to mention more events than men. This is especially the case when women are addressing their women friends. In this condition, the following events are also deemed as major:

- E1.1 she massages his back while lying on a table
- E2.0 they change places
- E3.0 she massages him
- E3.2 he turns on the radio
- E7.0 he exits
- E8.0 he returns

Of these, men speaking to men mention only E2.0. Women clearly fill in more detail when speaking to women friends, if only in the mention of macroevents, than do men speaking to men friends. Similarly, women speaking to strangers provide a bit more information (E2.0 (they change places), E4.2 (she gets up), E5.0 (they argue)) than do men speaking to strangers.

Finally, even when telling the story secondhand and speaking into the tape recorder, women tend to be somewhat more informative than men. Here, women treat as major events E4.0 (she gets upset), E5.0 (they argue), E6.2 (she starts to cry), and E7.0 (he exits). Men speaking to the tape recorder treat none of these as major events.

Conclusions

It can be seen from these results that there are both remarkable similarities and striking differences in firsthand and secondhand narratives. The similarities tend to be a function of cognitive processing factors, while the differences tend to result from differing social conditions and requirements.

Taking first the similarities, it would appear that such factors as frequencies of pauses and hedges, relative numbers of words per clause, and other such similarities result from constraints imposed by the processing architecture, constraints

involving such factors as the limitations of working (shallow) memory, and the like. The constancy in number of words per clause, for example, is likely a function of the optimum amount of information that can be held in shallow or working memory (Chafe, 1973; Kintsch, 1970) and harkens back to Miller's (1956) famous "magic number seven" observation.

Similarly, the consistency of operation of the closure and the (revised) given-new constraint also appear to be a product of processing considerations. Subordinate clauses tend to attach to final NPs simply because such a position facilitates both production and comprehension, whereas interrupting (medial) subordinate clauses inhibit such processing. The operation of the (amended) given-new constraint reflects a powerful discourse strategy for maintaining and advancing cohesion within the narrative, providing as it does a means for the hearer continually to extend and elaborate the mental model (in the sense of Johnson-Laird, 1983) being constructed.

The vast differences between the firsthand and secondhand narratives reflect differences in task demand and social functions. In this study, women seem to be more detailed and informative than men both in their narratives to other persons and in the impersonal situation of speaking secondhand to the tape recorder. At the same time, individuals speaking to friends of the same sex tend to be more informative, perhaps because of Gricean conditions, than when speaking to other friends or strangers.

In summary, the results of the present study reveal that in oral narrative discourse, both cognitive processing considerations and social factors interact to determine the form a narrative will take, a result which might seem obvious from the outset, but for which we can now offer empirical evidence in place of armchair speculation.

NOTES

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REFERENCES

- Bever, T.G. (1970). The cognitive basis for linguistic structures. In J.R. Hayes (Ed.), *Cognition and the development of language* (pp. 279-362). New York: Wiley.
- Brown, G., & Yule, G. (1983). *Discourse analysis*. Cambridge: Cambridge University Press.
- Chafe, W.L. (1973). Language and memory. *Language*, 49, 261-281.
- Chafe, W.L. (Ed.) (1980). *The pear stories: Cognitive, cultural, and linguistic aspects of narrative production*. Norwood, NJ: Ablex.
- Chafe, W.L. (1987). Cognitive constraints on information flow. In R.S. Tomlin (Ed.), *Coherence and grounding in discourse* (pp. 21-51). Amsterdam: John Benjamins.
- Clark, H.H., & Clark, E.V. (1977). *Psychology and language: An introduction to psycholinguistics*. New York: Harcourt Brace Jovanovich.
- Clark, H.H., & Haviland, S.E. (1977). Comprehension and the given-new contract. In R. Freedle (Ed.), *Discourse production and comprehension* (pp. 1-40). Hillsdale NJ: Lawrence Erlbaum.
- Fox, B.A., & Thompson, S.A. (1990). A discourse explanation of the grammar of relative clauses in English conversation. *Language*, 66, 297-316.
- Givón, T. (1988). The pragmatics of word order: Predictability, importance and attention. In M. Hammond, E.A. Moravcsik, & J.R. Werth (Eds.), *Studies in syntactic typology (Typological studies in language, Vol. 17)* (pp. 248-284). Amsterdam: John Benjamins.
- Hasher, L., & Griffin, M. (1978). Reconstructive and reproductive processes in memory. *Journal of Experimental Psychology: Human Learning and Memory*, 4, 316-330.
- Johnson-Laird, P.N. *Mental models*. Cambridge, MA: Harvard University Press.
- Kintsch, W. (1970). *Learning, memory and conceptual processes*. New York: John Wiley.
- Miller, G.A. (1956). The magic number seven, plus or minus two. *Psychological Review*, 63, 81-97.
- Owens, J., Bower, G.H., & Black, J.B. (1979). The "soap opera" effect in story recall. *Memory and Cognition*, 7, 185-191.
- Prideaux, G.D. (1989). Text data as evidence for language processing principles: The grammar of ordered events. *Language Sciences*, 11, 27-42.
- Prideaux, G.D. (1991). Syntactic form and textual rhetoric: The cognitive basis for certain pragmatic principles. *Journal of Pragmatics*, 16, 113-129.
- Prince, E.F. (1981). Toward a taxonomy of given-new information. In P. Cole (Ed.), *Radical pragmatics* (pp. 223-255). New York: Academic Press.

OVERLAPPING TALK IN COOPERATIVE AND CONFLICTIVE INTERVIEWS

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Goal and Background for Study

In a recent monograph, Coupland and Giles (1991) suggest that interaction which overlaps and stumbles--which ends up being miscommunicative in some way--is the communicative norm. Miscommunication has largely been constructed in negative terms in the broad literature on interaction. Coupland and Giles say on this point: "Our intention is to rescue miscommunication from its theoretical and empirical exile and explore its rich explanatory potential in very diverse contexts. It is easy to overlook what miscommunication may positively contribute to ongoing interaction and social relationships" (1991, 2-3). Miscommunicative exchanges are healthy manifestations of our desire to understand one another rather than pathological frailties in our failure to achieve some highly idealized communication model. It is in this spirit of assigning a positive valence to simultaneous talk that the study of overlaps is approached in this paper. Often overlaps are described in negative terms and linked exclusively to control behavior. A random sampling of a large corpus of advising interviews which were collected over a two year period demonstrated that overlaps were common occurrences, not restricted to conflictive interaction or male dominance behaviors.

The primary goal of this paper is to consider what are some functions that overlapping talk might serve in a power asymmetric context like a help-seeking interview where the help-provider tends to have greater power than the help seeker. A second goal in analyzing functions that overlaps serve is to see whether it made any difference if the interactants were cooperative or conflictive. The question of open access to courses at many large universities is problematic. Often students are unable to get courses that they would like in the scheduling lottery. Advisors' capacity to rectify discrepancies in course availability is a further problem. This is a very powerful context in which to examine overlapping talk between help provider and help seeker. Students, as they see their hopes to complete their degrees on time, grow more insistent just as advisors ability to deliver the needed help diminishes. Based on this imbalance between need and ability, one can predict that interruption would be likely to occur in conflictive rather than cooperative interaction. A third question that was considered was whether the gender of the help-seeker made any difference in overlaps. The students in the interviews analyzed in this study had already encountered initial rejection in their goal seeking. They were taking the next step to try to resolve their dilemma. Many help-seekers drop out after initial rejection. These are the more persistent women and men who have chosen to pursue their complaint to the next level.

A Definition of Terms

There is much discussion and deliberation in the conversational-analytic literature about when overlapping talk becomes an interruption. This distinction is not as clear-cut as it might initially seem. Early on, Jefferson (1973) identified a "no sooner -- no later" rule for interruptions. This constraint suggests that a speech act can be considered interruptive if it occurs outside of the vicinity of the transition relevance place, the point where the current speaker signals that she is ready to yield the floor to someone else. Bennett (1981) suggested that in addition to pre-empting the floor from someone else, an overlap becomes an interruption when it is seen as being intrusive by either or both of the interactants. The person who is talking is not ready to give up the floor to anyone else but the challenge to take the floor is made. Kennedy and Camden (1983) identified five categories of interruptions including clarification, agreement, disagreement, tangentialization, and subject change (1983, 50-52). McLaughlin (1984) agreed with Bennett that interruptions are generally viewed as being disruptive to the harmonious completion of a turn. She discusses "forced interruptions" which she defined as "simultaneous talk in which the intruding utterance results in the legitimate speaker giving up the floor" (1984, 127).

Early studies on gender and interruption showed that in mixed gender dyads, men tended to be more interruptive than women. (See Eakins and Eakins, 1976.) Zimmerman and West (1975) explained that this tendency of men to be more interruptive than women could be explained through power and dominance socialization. However, there were inconsistencies in how these studies defined interruption. In contrast to these earlier studies, Dindia (1987) found that men were not necessarily more interruptive than women and that women did not get interrupted more than men. Dindia posits that contradictions about gender and interruption can be explained through the analysis of interaction effect which earlier studies ignored (1987, 366). Wiley (1988) similarly found that gender was not a significant factor in interruption. Interactants who interrupted were regarded as more successful but less socially acceptable than the speaker who had been interrupted. The link between interruption and power rather than gender was also supported by the research of Kollock, Blumstein & Schwartz (1985). Smith-Lovin and Brody (1989) found that interruptions tend to show greater support when they occur in same sex groups. Craig and Evans' 1991 study of simultaneous speech patterns in children showed that boys tended to be more assertive and interruptive than girls.

Drummond (1989) provides a comprehensive overview of the problems in conceptualization of interruption that have characterized the literature on overlapping talk. More recently, Nofsinger (1991) identified three criteria that cause normal overlaps to be viewed as interruptive: whether or not the overlap is supportive or unsupportive, whether or not the person who overlaps prematurely self-selects or is selected by the current speaker, and whether either of the parties believes that turn-taking rights have been violated (Nofsinger 1991, 101). Nofsinger says that simultaneous talk is part of the normal operation of the conversational turn system where slight miscoordinations can be expected as the transition relevance place approaches. He insightfully observes that "Overlap can be a tactic for dominating a conversation, but it can just as well be a tactic for showing vigorous support of a speaker" (Nofsinger 1991, 104). He concurs with Jefferson's earlier observation that talking out of turn away from the vicinity of a

transition relevance place is correctly interpreted by interactants as an interruption.

In summary, in order for overlapping talk to be considered an interruption, it must manifest the following features. The most evident feature that an interruption is underway is that the competing speaker begins to talk out of turn at a juncture where the current speaker is not yet ready to yield the floor. No syntactic, semantic or paralinguistic cuing has been given to indicate that the one holding the floor is ready to turn it over to another party. An example of syntactic cuing would be if the current speaker selects another party by asking a question. Semantic cuing suggests that the current speaker has stated an opinion that another interactant would be able to summarize. It is clear that there is completion of a contribution to the dialogue. Paralinguistic cuing would be something like a change in intonation or eye gaze or a pause which are indicators that it's time for someone else to talk. A second feature to determine whether overlapping talk is perceived as interruption is to look for presence of talkover and/or delayed completion. If the original speaker continues to talk over the attempt to take the floor or if original speaker has a delayed completion of the turn at the conclusion of the overlap, both of these behaviors suggest that she was not yet ready to yield the floor to the other person. A third way to measure whether or not interactants perceive overlapping talk as interruptive is to ask them directly whether the overlap was supportive or unsupportive. This can be done in several ways. Subjects can view videotaped interactions or listen to audiotapes where there are overlaps and they can be asked to assess which are interruptive. Even better, would be to have interactants view videotapes or listen to audiotapes of their own conversations with others to determine where they believe interruptions occurred. Studies which proceed in this direction will help to clarify some of the confusion that has characterized research claiming to look at interruption.

Method

The university analyzed in this paper is a large public institution enrolling approximately 42,000 students on a single campus. The nine interviews included in this study were selected from a large corpus of 350 problem solving sessions which were audiotaped during registration in 1988 and again in 1989. Undergraduates who were dissatisfied with course availability or who had encountered insurmountable bureaucratic roadblocks were directed up the chain of command to this help-provider who had more decision making power than a typical academic advisor. The interviews were audiotaped with the consent of all parties in accordance with the university policy on human subjects. All nine interviews included the same advisor who was female. The interviews were selected to meet the following inclusion criteria: presence of overlapping talk, an equal distribution between female and male advisees, an equal number of cooperative and conflictive interviews. The interviews were transcribed by the researcher. Areas of overlapping talk were identified and a comparison of the functions of overlapping talk in the cooperative and the conflictive interviews was conducted.

Findings

This study began by assuming that overlaps would be more frequent in conflictive interactions. This predicted relationship was not supported.

Table 1 - Distribution of Overlaps by Interview Type

		cooperative interviews	conflictive interviews	average number of overlaps
short interviews	gender M	overlaps 10	overlaps 6	7
	F	8	5	
long interviews	M	17	15	16
	F	20	14	
TOTAL		56	40	

Table 1 illustrates that there is similarity in the distribution of overlaps regardless of whether the interview was cooperative or conflictive. In fact, there were more overlaps in cooperative interviews than in conflictive interviews. This limited sample also gives early indication that gender is not a significant factor in overlapping talk. Thus, contrary to what was expected, frequency of overlaps is not necessarily a good predictor of conflict, at least in these power asymmetric interviews. It would be important to contrast these early findings against overlaps generated in other power asymmetric contexts as well as power equivalent contexts. Secondly, in every instance, the help provider who held the decision making power in these interviews was a woman. Although several interviews were recorded with a male advisor, because the male advisor commanded less power than the woman advisor in this study, the databases were not comparable. The interviews with the male advisor were more routine scheduling rather than problem solving sessions. If gender were to have an impact on interruption, we might better find it at the level of gender differences in the interactive styles of help providers with help seekers of both genders. Varying the gender of the help provider would be a logical next step in this research, e.g. comparing student interviews of a male assistant chair with a female assistant chair.

Overlap in Cooperative Interviews

The strategic placement of interruptions: Examining these interviews, both in their audio format and in their written transcription, one is struck by the intense, active listening which characterizes these interactive exchanges. It is intense active listening in this sense. Help seekers listen without turn intervention to the point in the message where they receive the critical bit of information. It is at this point where overlaps, whether they be disagreement or topic shift to identify a few functions, are likely to occur. To illustrate, in the following example between female advisor and male student, the advisor suggests:

Example 1

Notation [] marks beginning and end of overlapping talk

A = advisor

S = student

UPPER CASE = emphasis

- 001 A: For the college level course I think you want to [think about]
 -> 002 S: **What about 475**
 003 A: I suspect it will [fill up quick]
 004 S: uh huh
 005 A: You probably won't [get it]
 006 S: uh huh
 007 A: We have a section of 430 that meets at 8:00 [in the morning]
 -> 008 S: **OH that's just**
 009 **TOO EARLY** for me

Notice in this example that the student listens just long enough for the critical part of the message to be communicated before he jumps in with the overlaps that are indicated in bold print in lines two and eight. The tone of this interview is clearly pleasant and cooperative. But the question remains -- should the overlap in line two be considered interruptive? The student clearly switches the topic that is being discussed. But notice in lines three and five that the advisor ratifies the student's topic shift by responding to it as a legitimate contribution rather than by talking through the overlap or using "delayed completion" of the turn. (Lerner, 1989 identified the concept of delayed turn completion.) Although this is a topic shift, it is a shift that moves in the direction of greater precision--away from a discussion of courses in general to a specific course. This moves the advising in a more helpful direction as the seeker's needs become clearer to the help-provider. Thus, by the criteria that were presented at the outset of this study, the overlapping move made in line 2 is not an interruption.

Similarly, we can argue that the overlap in line eight is clearly not interruptive as the advisor approaches the transition relevance place at the end of the turn which is clear from both the content (and the intonation on the audiotape). Although the advisor attempts to shift attention away from mention of 475 in line seven by identifying another course, a little later in the session attention is again refocused on this course.

- 020 A: 475 is gonna be a real po[pular one]
 -> 021 S: **It's in Holden** too
 022 That's my building That's why I like it {laughs}

The student capitalizes on the opportunity provided by the advisor's suggestion to say why the course is popular for him. This overlap in line twenty-two is clearly a cooperative receipt token. There is evident collaboration at many levels in this interview. Interaction collaboration is signalled by friendly overlaps as well as by semantic collaboration. The advisor is really trying to help this student find viable alternatives. For the mostpart, the student is open to alternatives suggested in the full interview (not included in this paper).

The second example provides additional evidence to document the existence of a collaborative overlap. This time the help-seeker is a young woman who comes to talk to the advisor.

Example 2

- 001 S: I didn't get [a class uh: 315]
 002 A: uh hum uh hum That's weird

- 003 S: They told me [it's full]
 004 A: No it's not
 005 OH I KNOW they changed the time
 006 S: Oh they [did it's not]
 007 A: It's on Tuesdays and Thursdays from 3 [to 4:20]
 -> 008 S: Oh I can't do that
 009 A: Yah they changed it [that's what happened]
 010 S: {Student laughs nervously}
 011 A: Let's see what else is [still open]
 012 S: yaaaah
 013 A: Have ya done 425 Let's see when that meet Let me [take a look here]
 -> 014 S: I think I had a
 015 scheduling problem with that one for some reason
 016 A: Don't tell me BAND {They both laugh} Guess what (3)
 017 Tuesdays and Thursdays [from 3:00 to 4:50]
 018 S: YAAAAH {LAUGHS}
 019 A: How about independent study They are looking for help in 326
 020 You can sign up for [four more credits]
 -> 021 S: I think I would rather have a class though
 022 A: Okay let's see what else

Notice the collaborative synchrony in these overlapping turns. Once again, as in the previous interview the interactants work together to forge a settlement for the credit shortfall. The overlaps in lines 8, 14, and 21 (although lines 10, 12, and 18 also are cooperative overlap continuers) are clearly interpreted by the advisor as cooperative receipt tokens--little prompts that move the discourse in a productive direction for both interactants. It is important that alternatives are identified as soon as possible. Neither party has time to waste. The student still has to rush to a registration to pick up courses that are decided upon before they are gone, and the advisor has other clients waiting for help. It is critical that both interactants provide each other with strategic information. Example two is an excellent demonstration of collaborative interactive achievement. Calling any of these overlaps interruption misses the point.

In summary, cooperative overlaps fine tune interaction. If interruptions are disruptive and jarring to interaction, these cooperative overlaps are at the opposite end of the interactive dimension. They help both parties achieve their goals in the interview. The student leaves the session with viable alternatives while the advisor gains a sense of satisfaction as a facilitator of the student's self empowerment. For one casually listening to these interviews or reading through the written transcripts, these overlaps might easily be coded as interruptions, but it would be a mistake to do so for the reasons which have been presented in this discussion.

Overlap in Conflictive Interviews

No one enjoys being placed in the position of refusal. As the period of registration draws to a close, the ability of advisors to accommodate student requests for help diminishes. The irony is that a large bureaucracy like the public

university analyzed in this study often does not discover discrepancies in student progress until very late in the game. When the alarmed student finally learns of the problem and rushes to an advisor, options are often extremely limited. This is hardly an optimal situation for anyone. Students may be so angry and upset when they learn about credit and requirement shortfalls that heightened affect prevents them from adequately explaining their situation. This inability to explain prompts the advisor to conduct fact-finding questioning to fill in the gaps in the student explanation. Students can easily misinterpret this questioning as a manifestation of the advisor's lack of confidence in the authenticity of their dilemma or as a sign of reluctance to help. Conflict is very possible in such a charged emotional context which demands skill and sensitivity from the advisor. The following two examples are beset with problems stemming from very different sources.

Example 3

- 001 S: I want to get into Com 431
 002 A: Yeah it's filled You probably [got deleted]
 003 S: **I can understand** [460 cause ya know]
 004 A: **Here's the list 200**
 005 people were deleted
 006 S: Is there gonna be another section
 007 A: Not this term We're tryin for next term
 008 S: Well why is that
 009 A: There's no money to put on another section
 010 S: How is it we're paying ALL THIS MONEY and we can't even
 011 get classes for graduation I [mean I don't know]
 -> 012 A: **I don't know**
 013 S: Well what I just want to know is why we can't get classes I will
 014 never graduate with [the major that I want]
 -> 015 A: **I can appreciate that**
 016 S: I'll be here if I don't get these classes I'll be here
 017 an [extra term or two]
 -> 018 A: **I can appreciate that** I can appreciate that There's really
 019 nothing that I can do
 020 S: Who can do something
 021 A: Talk directly to the prof perhaps he'll let you in right now it's up
 022 to him
 023 S: and the people who pay all the money and spend extra time have a
 024 [right to get the classes that they need]
 -> 025 A: **sure I can appreciate that**
 026 S: This is truly assinine

In example 3, all but one of the overlaps are done by the advisor as a strategy to support and comfort the student. This angry student lashes out using this interview as a forum to express larger grievances against the university. The advisor is powerless to help and can only offer sympathy as demonstrated in the overlaps in lines 12, 15, 18, and 25. However the student's anger is unabated fueled by the advisor's inability to help. Later in the interview the advisor suggests other alternatives but the session deadlocks over this one course.

In the next example, the altercasting of the advisor prompts conflictive overlapping. The advisor appears set on getting the student to show remorse for rude treatment to the staff. The student makes a weak concession in lines 8 and 9 but then backs off when she says "I won't insist on her apologizing." This comment prompts a further negative response from the advisor in line 14.

Example 4

- 001 A: I understand that you were rude to a number of people yesterday
 002 That really concerns me if you react that way under stress
 003 [how will you react on the internship]
- > 004 S: **Well I'm paying and I feel that** something's [owed to me]
 005 A: **Nonetheless**
 006 it was unfair of you to unload on those people I really think that
 007 you dumped on the secretary [and I]
- > 008 S: **I sorta feel** that your secretary kinda
 009 owes me an apology I have nothing a bout saving face and I will
 010 apologize to her cause that's what you want me [to do and I won't]
- > 011 A: **I would like for**
 012 **you to do that**
- > 013 S: **insist on her apologizing** but I feel that she owes me one as well
 014 A: You were ALSO RUDE to the DEAN'S secretary who [called and]
- > 015 S: **I was just**
 016 tryin to make an appointment I came up [with two times to see her]
- > 017 A: **I'm not tryin to put you**
 018 in a justification mode just give you friendly advice You left a
 019 trail of 3 people who thought you were a rude person I'm just
 020 suggestin it might be good to go back [and say I overreacted]
- > 021 S: **I'm just tryin to graduate**
 022 A: Would it be too much to say I'm sorry [I overreacted]
- > 023 S: **I do that all the time**
 024 A: Well in this case I think you should do it [I'm concerned how you]
- > 025 S: **I probably have a lot**
 026 more experience outside school than most people
 027 A: Every time we've talked you were angry [hostile and frustrated]
- > 028 S: **Well that's when you go**
 029 and see an advisor

Folger, speaking of power asymmetric situations of conflict, observes that "when power is imbalanced, the stronger and weaker members both face dilemmas as they make moves and step through difficult conflict situations. Stronger members can exhaust their power by its use, they can consciously or inadvertently set terms for a settlement that encourages continued escalation, and they can make faulty assumptions about the likely response of a weaker person." (1984, 146). In example four, the advisor presents an interpretation of events that the student disagrees with. The overlaps (in lines 15, 21, 23, 25 and 28) are defensive reactions which attempt to overturn attributions of blame. They are protests against what the student sees as unfair interpretation. The advisor alternates between positive and negative altercasting. Negative altercasting is

defined as statements of reprimand attributing blame for deficiencies in behavior. Positive altercating suggests what a good person would do in this context (Folger 1984, 30-31).

In summary, the help-seeker in this example defensively interrupts both positive and negative altercasts. She takes issue with the advisor's blame attributing statements. These overlaps can be said to be interruptions because they are more emotionally charged than overlaps in the cooperative interviews. They are assertive and discordant in their semantic, syntactic, and paralinguistic content and thus move closer to the definition of interruption. The advisor even makes a metalinguistic comment about conflict in lines 17 and 18 pointing to the recognition of problematic interaction.

Discussion and Conclusions

Overlaps, in the interviews which were analyzed in this study, primarily function as receipt tokens that indicate keen listening between interactants. As long as the advisor exhibits advocacy orientation, overlaps have a cooperative character. Contrary to what was expected, an interesting finding of this study is that overlaps in cooperative interviews are often used to switch topic while in conflictive interviews, overlaps are mechanisms which sustain discussion of a topic or which reopen a topic that is about to be closed down. In cooperative interviews overlaps can function as a gentle nudge which move the interaction with subtlety. Although they sustain topic, overlaps in conflictive interviews are more jarring and challenging. They occur almost exclusively in the context of negative altercating where either of the interactants is prompted to engage in defensive behavior.

So we finish where we started with Coupland and Giles' mandate to look at miscommunicative exchanges as the informative norm for understanding what is going on in interaction. In optimal communication, overlaps are construed as interactive failure. But we see from this study that this conception is a gross oversimplification of what's happening in overlapping talk. The findings of this study provide support for Coupland and Giles' observation that miscommunication can be evocative and is normative. The interviews analyzed in this study show that overlaps are not a fall from interactive accomplishment. In fact, they are often the vehicle through which collaborative achievement is negotiated. Further, these interviews suggest some directions in which the study of interruption might proceed. The next step is to set up structured research in which subjects will listen a select sample of these interviews and be asked to evaluate when they think interruptions have occurred.

References

- Bennett, A. (1981). Interruption and the interpretation of conversation. Discourse Processes, 4, 171-188.
- Coupland, N., Giles, H. & Wiemann, J.M. (1992) Miscommunication and Problematic Talk. Newbury Park, CA: Sage Publishing Company.
- Craig, H.K. & Evans, J.L. (1991). Turn exchange behaviors of children with normally developing language: The influence of gender. Journal of Speech and Hearing Research, 34 (4), 866-878.

- Dindia, K. (1987). The effects of sex of subject and sex of partner on interruptions. Human Communication Research, 13, 3 (Spring), 345-371.
- Drummond, K. (1989). A backward glance at interruptions. Western Journal of Speech Communication, 53 (Spring), 150-166.
- Eakins, B. & Eakins, G. (1976). Verbal turn-taking and exchanges in faculty dialogue. In B. Dubois & I. Crouch (Eds.) The Sociology of the Language of American Women (pp. 53-62), San Antonio, TX: Trinity University Press.
- Folger, J.P. & Poole, M.S. (1984). Working through conflict: A communication perspective. Glenview, IL: Scott, Foresman and Company.
- Jefferson, G. (1973). A case of precision timing in ordinary conversation: Over lapped tag-positioned address terms in closing sequences. Semiotica, 9, 47-96.
- Kennedy, C.W. & Camden, C.T. (1983). A new look at interruptions. Western Journal of Speech Communication, 47, 45-48.
- Kollock, P., Blumstein, P., & Schwartz, P. (1985). Sex and power in interaction: Conversational privileges and duties. American Sociological Review, 50 (February), 34-46.
- Lerner, G.H. (1989). Notes on overlap management in conversation: The case of delayed completion. Western Journal of Speech Communication, 53, 167-177.
- McLaughlin, M.L. (1984). Conversation: How talk is organized. Beverly Hills, CA: Sage Publishing Company.
- Nofsinger, R.E. (1991). Everyday conversation. Newbury Park, CA: Sage Publishing Company.
- Smith-Lovin, L. & Brody, C. (1989). Interruptions in group discussions: The effects of gender and group composition. American Sociological Review, 54 (June), 424-435.
- Wiley, M.G. & Woolley, D.E. (1988). Interruptions among equals: Power plays that fail. Gender and Society, 2 (1), 90-102.
- Zimmerman, D.H. & West, C. (1975). Sex roles, interruptions and silences in conversations. In B. Thorne & N. Henley (Eds.) Language and Sex: Difference and dominance (pp. 105-129). Rowley, MA: Newbury House.

DISCOURSE ANALYSIS IN APHASIC SPEECH:
A Preliminary Report
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INTRODUCTION

As with normal language, a basic principle underlying phenomena in aphasic speech is that language disruption is rule-governed. For instance, according to Blumstein (1973:24-27), *phoneme-substitution*, a phenomenon encountered in paraphasia, is a non-arbitrary occurrence. Generally, the substituted phoneme deviates from the target-phoneme by no more than one distinctive feature. In fact, the linguistic disruption produced by aphasics can be placed on a continuum: from normal, with least frequency of occurrence, to *aphasic*, where the frequency of errors is disruptive (Ulatowska and Bond 1983:23). Evidence suggests that this principle pertains to discourse analysis as well.

As a case in point, discourse analysis which takes into account the interrelationship of social, psychological and linguistic information inherent in any given communicative event (Hallyday 1978:46) suggests that communicative events vary across contexts and topics depending on the social and physical circumstances of the event, on the identities, attitudes, abilities and the interpersonal relations of the participants (Coulthard 1985; Leech 1983; Weiner & Labov 1972). Clinical studies on aphasic speech¹ confirm these theoretical postulates as they report that the ability to effectively communicate is not merely dependent on a patient's linguistic competence. Rather, situational variables can and do significantly alter their linguistic proficiency (Glosser et al. 1988, Gurland et al. 1982; Yorkstone et al. 1980).

THE STUDY

In keeping with the theoretical framework delineated above, the present study analyzed both *topic* and *listener familiarity* in relation to two types of organizational discourse: *narrative* and *procedural*². The two genre were further contrasted by the use of planned vs. unplanned discourse³ in the hope of discovering whether or not a variation existed between textually given vs. textually new convention. Therefore, in the narrative task, aphasic patients were presented with a

story outlined to them beforehand, while in the procedural task they were required to spontaneously create a text.

Previous studies involving altering the *listener variable*⁴ have already compared the verbal output of aphasic patients in the presence of *familiar* vs. *unfamiliar listeners*. They report that unfamiliarity with the interviewer tended to elicit from aphasic patients lengthier and more profuse verbal constructs (Gurland et al. 1982; Yorkstone et al. 1980). Research on manipulating *topic familiarity variable* is not to date available in clinical studies of aphasic speech. However, studies in normal populations (Hermann 1983), suggest that speakers tend to increase the degree of verbal complexity when discussing unfamiliar topics. To my knowledge, no studies are available on planned vs. unplanned⁵ discourse in aphasic speech. In fact, most research in this area is generally limited to narrative elicited from the patients by presenting a picture from which they are asked to create a coherent story.

PURPOSE OF THE STUDY

The impetus for this investigation arose from the present methodology employed by speech and language pathologists who are routinely involved in the diagnosis and treatment of aphasia. More specifically, aphasia tests are administered by speech pathologists--generally unfamiliar listeners-- who use standard test stimuli--generally unfamiliar topics-- and thus elicit language samples not representative of the aphasic speakers' actual linguistic performance which might be apparent in more natural environment with familiar topics and familiar listeners. Indeed, families of aphasic patients often remark that the patient's verbal output differs when in the clinical environment from that exhibited at home.

Thus, the present research, which examined the influence of the two crucial situational variables: first, that of listener-familiarity and second, that of topic-familiarity on the verbal output of aphasic patients, was devised to test whether --as the research among normal population suggested (see Glosser et al. 1988)--greater linguistic complexity would arise also in aphasic speech with the unfamiliarity of a listener or that of a topic.

METHODOLOGY

Following Blumstein (1973), chosen as subjects were twentytwo (22) aphasics⁶. In addition, ten (10) conventional speakers were used as control subjects. All subjects were married so that the spouse served as the *familiar* listener. The investigator, on the other hand,

represented the *unfamiliar* listener.

As to the methods employed for this investigation, to determine the *familiarity* of certain topics, thirty (30) normal adult "judges" were presented with a list of eighty-four (84) potential topics -- such as "making a sandwich" or "assembling a model airplane". The judges were then asked to rate each topic on a five (5) point scale of familiarity. The top-ranked ten (10) topics served as *familiar* topics while the bottom-ranked ten (10) topics served as *unfamiliar* topics.

Upon completion of the testing sessions, subjects completed a questionnaire (Britton & Tesser 1982) pertaining to their personal familiarity with the topics. This measure was designed to rule out any idiosyncratic differences in topic familiarity that may have occurred on an individual basis.

Subsequent to the determination of familiar vs. unfamiliar topics, two experimental tasks were developed: a *narrative discourse* task and a *procedural discourse* task (see Appendix 1). Following Gülich & Quastoff (1985), ten stories were developed for the story retelling task. Five of these stories centered on a topic rated by the judges as familiar while the other five stories were developed around a topic rated as unfamiliar. To insure structural cohesiveness and textual unity, all stories consisted of seven sentences with vocabulary level, grammatical complexity and sentence-length balanced across stories. All stories also contained a setting, a series of hierarchically ordered actions and a resolution. The subjects were instructed to: "listen first and then be prepared to tell the story back".

For the *procedural discourse* task, five familiar and five unfamiliar topics were again selected on the basis of the judges ratings. Subjects were instructed to orally produce a narrative for a particular procedure at the prompt: "tell how you would go about getting ready for bed in the evening".

To date, all the verbalizations of both conventional and aphasic subjects have been transcribed from the tape recorded testing sessions. There were forty different transcripts to analyze for each subject: five familiar and five unfamiliar topics for two tasks produced once for a familiar, once for an unfamiliar listener. Measures developed to score the syntactic, semantic and discourse structures were based on the normal population samples. The following is a list of the verbal complexity measures that were used (see appendix II).

For the morphological measures, we tallied vocabulary size. The tally was based on the percentage of function words (such as prepositions, pronouns,

conjunction) vs. the percentage of content words (such as verbs, nouns, adverbs, adjectives).

As for the syntactic measures, these measures were based on T-units⁷. The tally included the number of T-units, the number of clauses per T-units, the percentage of dependent clauses, and the percentage of non-finite clauses. Similar measures have been used by other investigators to assess the complexity of linguistic constructs (Glosser et al. 1988; Ulatowska et al. 1983).

PRELIMINARY RESULTS

At this stage all transcripts have been scored. The general character and structure of the responses to the two tasks-- the *Narrative Discourse* and the *Procedural Discourse*, were quite distinct. Among the control group, that is, among the conventional speakers, procedural discourse utterances were explicit, lengthy and markedly complex, with a high percentage of subordinate clauses. In contrast, the T-units of the narrative discourse were shorter and less complex, patterned as they were after the tightly structured stories presented to them.

In terms of clarity and amount of information expressed, the most successful aphasic responses to both types of discourse tasks were by those aphasics who adopted a concise T-unit structure with little grammatical complexity. A preliminary examination of the instances of greater grammatical complexity among the aphasics appears to indicate that a large percentage of the complexity found in discourse on unfamiliar topics is due to circumlocutions.

Both conventional and aphasic subjects, however, often tended to retell the story in a more complex form (more subordinate clauses) than the original story presented to them.

With regard to the topic familiarity variable, we found in the procedural task that two dependent variables had significant main effects. First, the mean number of T-units for familiar topic across all groups was higher (6.64) compared to that of unfamiliar topic (5.21). That is, the number of T-units increased significantly with topic familiarity. On the other hand the number of clauses per T-unit, a measure of significant complexity, reflected a significant increase with unfamiliarity of topic. Thus the mean number of clauses per T-unit increased from 1.47 for familiar topic to 1.87 for unfamiliar topic. In the narrative task the number of T-unit was also slightly higher across groups, with a mean of 5.12 for familiar topic to that of 4.46 for unfamiliar topic. Once again there was an increase of clauses per T-unit but this time the increase occurred with the familiarity of topic (6.82) as opposed to the unfamiliar topic (6.35). The percentage of lexical words per T-unit also increased slightly, from familiar topic 49.79 to unfamiliar topic 51.68.

As for the listener familiarity variable, the preliminary analysis shows no significant effect. These

results appear to contradict research by Gurland et al. (1982) and Yorkstone et al. (1980) who categorically stated that the unfamiliarity of the listener should produce markedly lengthier and more profuse verbal constructs. We feel that the discrepancy may be explained if one takes into account the ages of the patients and of the listeners. It appears that patients were generally older and the interviewer much younger nullifying the formal vs. informal variable predicted by Gurland (ibid.) and Yorkstone (ibid.).

CONCLUSION

The main thrust of this study was to examine the differences in aphasic speech with both familiar and unfamiliar interlocutors and topics. To date, no conclusive inferences can be drawn other than subjects seemed to respond to both familiar and unfamiliar listeners, as well as to familiar topics, with coherence and complexity while showing less fluency with unfamiliar topics. This in itself is a significant finding. Meanwhile, the complete statistical analysis of the data is still pending and hopefully will bring new insights into the problems faced by speech pathologist in the administration of aphasia tests.

NOTES

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1. Aphasic speech is produced by individuals suffering from language deficits as a result of stroke or trauma
2. Longacre (1976) recognizes four main organizational patterns in discourse studies: narrative discourse, a description of a sequence of events or episodes conceptually or chronologically linked which focuses on who or what; procedural discourse, a number of hierarchically ordered segments which refer to how something is done; conversational discourse, where information is exchanged through turn-taking behavior; and expository discourse, where the discourse centers on a specific topic

3. **Planned discourse includes complex syntactic structures** (i.e., complementation, cleft construction, passives and certain types of relative clauses) and more formal discourse devices such as transitional terms and terms of textual cohesion (i.e., for example, that is, on the other hand) in contrast to unplanned discourse which is characterized by greater reliance on structures acquired easily in language development (Ochs 1979:54)

Planning entails a *design* or *organization*. In unplanned discourses, the speaker has not arranged how an idea or set of ideas, a speech act, or an event will be executed prior to the time of communication. In other words, *unplanned discourse* has no forethought and organizational preparation, it is spontaneous while *planned discourse* has been thought out and organized (designed) prior its expression (Ochs 1979:55).

4. Examining the effects of situational variation on the verbal output of aphasic patients has focused, in addition to the listener variable, also on the setting (Wiener et al. 1972). Altering the *setting* by contrasting face-to-face conversation with conversation held either through a visual barrier or via telephone resulted in the production of greater linguistic structural complexity by the aphasic speaker when visual access between the interviewer and the subject was restricted (Glosser et al. 1988).

5. Unplanned discourse does not refer merely to lack of forethought and organization. In fact, unplanned discourse may be planned with respect to both reference and predication, as well as the norms of politeness appropriate to the situation. It may, however, not be planned with respect to the level of politeness germane to the communicative situation and the speaker may even have failed to incorporate in his plan information regarding the communality of reference. In such instances, the discourse is unplanned with respect to its referential dimension but planned with respect to its non-referential dimension (Ochs 1979:56-7).

6. Aphasic subjects included five (5) Broca, seven (7) Conduction aphasics, and ten (10) Anomics. Anomics and conduction aphasics are characterized as "fluent". Such speakers generally possess good comprehension and normal speech rate and intonation, as well as good grammar (Davis 1983:19). Subjects diagnosed as anomic, on the one hand, usually exhibit word retrieval difficulties and therefore often substitute indefinite nouns and pronouns for substantives (Lindebaugh 1990:96). Conduction aphasic, on the other hand, will produce adequate spontaneous speech. The latter, however, is marred by frequent sound substitutions, circumlocutions and word finding delays, such impediments make it particularly difficult to repeat what they have heard (Davis 1983:21; Simmons 1990:54) for such patients.

7. A T-unit refers to a meaningful utterance, including paratactic or hypotactic combinations such as coordination, opposition and/or modification. Each T-unit contained at least one independent clause, and where appropriate, also verbal and/or nominal structural composites.

APPENDIX I

EXAMPLE OF NARRATIVE DISCOURSE

Familiar Topic

MAKE A SANDWICH.

SETTING	Joe has to make his lunch.
ACTION	He takes two slices of bread, reaches for the peanut-butter, and drops the jar. He is very disappointed. He leaves for work without his sandwich.
RESOLUTION	He is not going to have lunch today.

EXAMPLE OF PATIENT'S RESPONSE

SETTING	Joe met a sandwich for his lunch.
ACTION	So he got two pieces bread and he ran for peanut-butter and he dropped it and couldn't make his sandwich.
RESOLUTION	So he didn't have no lunch that day

EXAMPLE OF UNFAMILIAR TOPIC

CONDUCT A SYMPHONY.

SETTING	The guest conductor was scheduled to rehearse with the orchestra.
ACTION	He greeted the musicians, glanced at the music, and picked up his baton. His body moved in rhythm with the music. Beautiful sounds filled the concert hall.
RESOLUTION	The rehearsal was a success.

LIST OF PROCEDURAL DISCOURSE TOPICS

Familiar: Go to a Market, Get Ready for Bed, Get a Haircut, Go out to Dinner, Clear a Table.

Unfamiliar: Paint a Watercolor, Make a Bean Bag Chair, Mountain Climbing, Make a Ceramic Vase, Saddle a Horse.

APPENDIX II SYNTACTIC MEASURES

1) T-Unit

One main clause plus the sub-ordinate clauses attached to or embedded within it.

2) Main Clause

One main clause consists of a NP + VP.

- * Joining independent clauses.

Coordinating (NP) + VP with another NP + VP with: and, or, but, for yet, so.

Correlating NP + VP with NP + VP with: both-and, either-or, not only-but also, neither-nor.

Most used conjunctive adverbs of NP + VP: however, anyway, also, again, besides, in fact, likewise, thus, then, first, later, finally.

- * Any independent clause connected by a coordinating conjunction within an utterance must be counted as a separate T-unit.

Example: one utterance with 3 T-units

- 1) I would look at the menu/
- 2) decide what I was going to have/
- 3) and order it.

- * Repetitions and false starts are to be deleted--count final attempt.

3) Dependent Clauses

- * Dependent clauses function as adverbial, adjectival, nominal or sentence modifiers with a finite verb.

- * Dependent clauses are subordinated to main clause by the use of conjunctions such as: because, since, in that, if, although, though, even though, unless, as though, as, in order that, so that, after, before, since, until, while, when.

- * Non-finite clauses contain a gerund (i.e., going), a participle (i.e., gone), or an infinitive (i.e., to go) rather than a verb marked for tense, mood, aspect, and voice and its auxiliary.

- * All relative pronouns introduce dependent clauses: who, whose, whom, which, that.

- * All relative adverbs introduce dependent clauses:
where, when, why.

MORPHOLOGICAL MEASURES WORD COUNT

* Count the Following:

- 1) Count all words in the T-unit.
- 2) Cross out words not to be counted making sure they are still legible.
- 3) Count words that contain sound substitutions, omissions, distortions, or additions if the words are intelligible in context (i.e. hiccup for hiccup).
- 4) One word/ Two words:
 - a) Count contractions (don't, he's, gonna, sorta) as 2 words.
 - b) Count hyphenated words (scuba-diving) as 2 words.
 - c) Count each word within the number (e.g. twenty-two as 2 words; one hundred thirty four is 4 words).
 - d) Count compounds (cowboy) as 1 word.
 - e) Count proper names (Mary Smith) as 2 words.
 - f) Count acronyms (TWA) as 1 word.

LEXICAL WORDS/ FUNCTION WORDS

Lexical words include:

nouns (girl)
verbs (is, was)
adjectives (good)
adverbs (quickly)

Function words include:

prepositions (above)
conjunctions (and, before)
Determiners such as: articles
(the, a), pronouns including
relative pronouns (mine, yours)
demonstrative (this, that)
quantifiers (some, a few)
very (very good)
Auxiliaries such as: modals
(could, can), have (have gone),
be (was gone), do (do you?)
A verb + adverb (go away) = 1
lexical and 1 function word

COMPLEXITY MEASURES
SCORING SHEET

Proc _____ Story _____ SPKR# _____
 Fam Lis _____ Unf Lis _____ Type of Aphasia _____
 Topic _____ Scorer _____

	Length T-unit	# of words func. Lex		Total # of clauses	# of dep. cls.	Non fint
Sent 1						
Sent 2						
Sent 3						
Sent 4						
Sent 5						
Sent 6						
Sent 7						
Sent 8						
Sent 9						
Sent 10						
Totals						
Percent		%	%		%	%

#of clauses/T-unit _____

MLU = # of words/T-unit _____

Vocab. size _____

Discourse Struc.

Setting	# Action	Resolution

SELECTED BIBLIOGRAPHY

- Benson, D. Frank. 1979. Aphasia, Alexia, and Agraphia. New York: Churchill Livingstone.
- Blumstein, Sheila. 1973. A phonological investigation of Aphasic Speech. The Hague: Mouton.
- Britton, B.K. & Tesser, A. 1982. Effects of prior knowledge on use of cognitive capacity in three complex cognitive tasks. Journal of Verbal Behavior, 421-436.
- Coulthard, M. 1985. An Introduction to Discourse Analysis. London: Longman.
- Davis, Albyn G. 1983. A Survey of Adult Aphasia. Englewood Cliffs, N.J.: Prentice Hall.
- Givón, Talmy 1979. From Discourse to Syntax: Grammar as Processing Strategy. In Syntax and Semantics. T. Givón, ed., vol.12 New York: Academic Press pp 81-112.
- Glosser, G., Wiener, M. & Kaplan, E. 1988. Variations in aphasic language behaviors. Journal of Speech and Hearing Disorders, 53, 115-124.
- Gülich, Elisabeth and Quasthoff, Uta M. 1985. Narrative Analysis. Handbook of Discourse Analysis, Vol. 2. Ed. Teun A. Van Dijk. London: Academic Press (169-198).
- Gurland, G.B., Chwat, S.E. & Wollner, S.G. 1982. Establishing a communication profile in adult aphasia: Analysis of communicative acts and conversational sequences. In: R. Brookshire (Ed.) Clinical Aphasiology Conference Proceedings. Minneapolis: BRK Publishers.
- Hallyday, M.A.K and Hasan. 1976. Cohesion in English. London: Longman.
- Hermann, T. 1983. Speech and Situation. New York: Springer-Verlag.
- Hyman, L. 1971 Consecutivization in Fe'fe'. Journal of African Languages 10.
- Hymes, D. 1974. Foundation of Sociolinguistics. Philadelphia: University of Pennsylvania Press.
- Jakobson, Roman. 1980. On aphasic disorders from a linguistic angle. The Framework of Language. Michigan Studies in the Humanities. 93-112.
- Janda, R. 1976. The language of note taking as a simplified register. Manuscript. Stanford: Stanford University.
- Keenan, Elionor and Bennett, T., eds. 1977. Discourse Across Time and Space. SCOPIL, Los Angeles: University of Southern California.
- Labov, W. 1972. Language in the Inner City. Philadelphia: University of Pennsylvania Press.
- Leech, G.N. 1983. Principles of Pragmatics. London: Longman.
- Linebaugh, Craig W. 1990. Lexical retrieval problems: Anomia. La Pointe, Leonard L. (ed.). Aphasia and

- Related Neurogenic Language Disorders. New York: Thieme Medical Publishers. 96-112.
- Linebaugh, Craig W. 1984. Mild aphasia. Holland, Audrey L. (ed.). Language Disorders in Adults: Recent Advances. San Diego: College Hill Press. 113-132.
- Longacre. 1976. An Anatomy of Speech Notions. Lisse: Peter de Ridder Press.
- Mandler, Jean M. 1987. "On the Psychological Reality of Story Structure" Discourse Processes, 10 (Jan-Mar), 1-30.
- Nation, James E. and Aram, Dorothy M. 1984. Diagnosis of Speech and Language Disorders, 2nd ed. San Diego: College Hill Press.
- Ochs, Elionor, 1979. Planned and Unplanned Discourse. In Syntax and Semantics. T. Givón, ed., vol.12 New York: Academic Press. 51-80.
- Peterson, Harold A. and Marquardt, Thomas P. 1990. Appraisal and Diagnosis of Speech and Language Disorders. Englewood Cliffs, N.J.: Prentice Hall.
- Prideaux, Gary D. 1987. Discourse influences on the syntax of ordered events. The fourteenth LACUS forum. Ed. Sheila Embleton. Lake Bluff, Illinois: Linguistic Assoc. of Canada and the United States. 309-317.
- Simmons, Nina N. 1990. Conduction aphasia. La Pointe, Leonard L. (ed.). Aphasia and Related Neurogenic Language Disorders. New York: Thieme Medical Publishers. 54-77.
- Ulatowska, H. and Doyle, A.W., Freedman-Stern, R. & Mancaluso-Haynes, S. 1983. Production of procedural discourse in aphasia. Brain and Language, 18, 315-341.
- Ulatowska, H. and Bond, Sandra A. 1993. Aphasia: discourse considerations. In Topics in Language Disorders. Aspen System Corporation:Geithersburg MD. 29-34.
- Van Dijk, Teun A (ed). 1985. Handbook of Discourse Analysis, Vol. 2: Dimensions of Discourse. London: Academic Press.
- Whurr, Renata. 1982. Towards a linguistic typology of aphasic impairment. Linguistic Controversies. Ed. David Crystal. London: Edward Arnold Publishers. 239-257.
- Wiener, M., Devoe, S., Rubinow, S. & Geller, J. 1972. Nonverbal behavior and nonverbal communication. Psychological Review, 79, 185-214.
- Yorkstone, K.M., Beukelman, D.R. & Flower, C.R. 1980. Efficiency of information exchange between aphasic speakers and communication partners. In: R. Brookshire (Ed.) Clinical Aphasiology Conference Proceedings. Minneapolis: BRK Publishers.

Situational Focusing

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Introduction

To the best of my knowledge, a feature of ordinary discourse that seems never to have been studied, or even identified, as such, is the strategy by which an addresser deliberately elaborates upon the literal or information content (IC) of a message in such a way as to take the addressee "into the situation" to which he or she apparently wants to draw attention. This strategy can be called "situational focusing" (SF). An example of an SF-structured utterance is the following:

IC-Structured Utterance	SF-Structured Utterance
A professor might wish to relay a message with the following IC structure to one of his students: "I have been teaching for over twenty years."	The same professor, having become tired of his job, might wish to relay this same message as follows: "I have had my back to a blackboard for over twenty years." (This is different from the IC-structured one primarily in its portrayal of the teaching scene).

My plan is to define and illustrate this discourse feature, since I believe it to constitute further evidence in favor of the view that verbal communication is not a script-based, disembodied, information-transfer process *à la* Claude Shannon (1948) or Norbert Wiener (1949), a theoretical model under whose influence many contemporary discourse analysts continue to work. SF, like other "creative" discourse phenomena studied by the late Robert J. Di Pietro (e.g. 1987), lead me to believe, on the contrary, that verbal communication

is hardly ever a neutral, abstract information-transfer act. It seems, almost always, to involve what Di Pietro has appropriately called "strategic interaction," a mode of human interactive behavior that unfolds in terms of the enactment of ego-centered agendas, goals and affective states.

A Working Definition

In the last few decades, the study of discourse in linguistics proper has been conducted primarily within a scientific frame of mind that views human cognitive activity as describable with the notions and models developed by communications engineers and artificial intelligence researchers. In actual fact, this "new" trend is really no more than a modern version of what can be called the "computational fallacy"--the Hobbesian and Cartesian view that the mind's activities operate in mechanical ways. The new impetus and momentum that this fallacy has gained has also rekindled what is perhaps the oldest debate in philosophy: Is "meaning" a derivative of individual experience (the experientialist perspective)? Or, is it "out there," waiting for the innate machinery of the mind to capture and store it independently of bodily processes and individual feelings (the objectivist perspective)?

Before writing this essay, I undertook a perusal of some of the "mainstream" journals in linguistics (e.g. *Language*, *Journal of Linguistics*, *Foundations of Language*, *Linguistic Inquiry*, etc.) over the decade of the 1980s. I discovered that, by and large, the objectivist perspective emerges as the dominant one in the relatively new field of discourse and conversation analysis. The emphasis appears to be on cataloguing and explaining speech acts as extended projections of grammatical rules: i.e. discourse analysis seems to be focusing, by and large, on studying the systematic use of the lexical and grammatical devices that allow for economy in cross-reference (e.g., anaphoric and cataphoric reference), ellipsis, discourse-text cohesion, and so on. The exception to this has, of course, been the functional approach of Austin (1962), Joos (1967), Searle (e.g. 1969, 1976), Hymes (e.g. 1972), Halliday (e.g. 1975, 1985), and others that has its roots in the early work of Wittgenstein (1922), Malinowski (1923), Bühler

(1934) and Firth (1951). The pivotal research of such scholars has shown that discourse goes well beyond grammatically-constrained information transfers. It involves determining *who* says *what* to *whom*; *where* and *when* it is said; and *how* and *why* it is said. It involves, in other words, contextual parameters such as the setting, the message contents, the participants, and the goals of each interlocutor. All these contextual factors are critical in determining the specific form a speech act will assume (a good recent review of the work on speech as a transactional process can be found in Goodwin and Duranti 1992).

What Di Pietro (1987: 6) has added to the study of discourse is a focus on its interactive dimension, i.e. on the use of language to portray roles, speaker identities, and deeply-felt life experiences. Few have investigated the intrinsic involvement of the personality dynamics of interlocutors in speech acts as insightfully as has Di Pietro.

Situational focusing is just one area of discourse programming supporting Di Pietro's strategic view of human interaction. At the center of this view is the idea that discourse is dependent upon the strategic and tactical value of the words and structures chosen by the speakers. Communication is a goal-oriented activity, and language provides the tools that speakers can utilize to enact or externalize their "ego-dynamic" states, to use Renzo Titone's (e.g. 1977) appropriate term. Interlocutors are continually engaged in bringing about the realization of ego-centered agendas and goals through negotiation, manipulation, suasion, and other strategies. Di Pietro (1987: 41) defines *strategic interaction*, in fact, as the purposeful and artful use of language when dealing with others.

SF can be defined in Di Pietrian terms as an interactive strategy deployed by the addresser to relay his or her feelings to the addressee, by bringing the addressee verbally into the realm of his or her life experiences. It is different from conative communication, Jakobson's (1960) widely-used term for any speech act aiming to make some effect on the addressee; nor is it quite what I have previously designated as "psycholect" (Danesi 1982), or the use of language in

instrumental ways. Is is, however, quite similar to what Goodwin and Goodwin (1992: 181) have recently designated "assessments": i.e. strategies which "provide participants with resources for displaying evaluations of events and people in ways that are relevant to larger projects that they are engaged in."

In some ways, the study of SF is akin to psychoanalysis. In looking for SF in discourse samples, the linguist, like the analyst, must be trained in the "strategies of the language game," as Peter Farb (1974: 70) has so aptly put it. SF suggests that in verbal exchanges the ego-dynamic level is always a potential factor in shaping discourse. It bears witness to the fact that the individual's motivations and feelings undergird the structuring of speech acts. As Titone (1977) points out, the individual's personality system inheres in a dynamic organization of the psychosocial subsystems within the individual that determine his or her characteristic behavior and thought. It is an open-ended system that allows human beings to relate directly to the outside world. In actual discourse it controls the ability to talk about experience, to adjust to speech patterns according to life situations (including the knowledge of when not to speak), to express attitudes, to retrieve information about oneself verbally, to communicate intentions, and to use language for self-awareness. The ego-dynamic level constitutes, in essence, the "will" to communicate. SF is a direct trace to the workings of this level.

Some Examples

I have employed a kind of "ongoing" field work technique to record and document the SF phenomenon: i.e. while engaged in normal conversations, especially over the last decade, I would always jot down in a small notebook which I would often carry with me any utterance that I recognized or suspected to be an instantiation of SF. The examples cited here are selections from my "linguist's little black book." These are, therefore, actual samples of SF-structured discourse.

How does SF appear to work? Like a lens scanning the emotionally-meaningful areas in one's life domain, the SF-structured utterance highlights specific features from this domain for the addressee to focus on. In this fashion, the addresser is able to provide a commentary either on his or her affective state, or on his or her perception of a situation. In a way, SF attests to the veracity of the Italian proverb *la lingua batte dove il dente duole* (literally "the tongue touches the hurting tooth"): i.e. feeling-states will out, no matter what.

I have organized the examples in terms of their actual tokens as I recorded them followed by my interpretation of each one--an IC analysis or contextual paraphrase of each utterance, together with an identification of the relevant situational feature (RSF) which the addresser wants his or her addressee to focus on.

SF Token	IC Analysis
I've faced admiring eyes for twenty some odd years.	Uttered to me by a colleague in order to convey to me that he had really enjoyed teaching at the university because of the unique kind of attention it had gotten him over the years (RSF: the "admiring eyes" of his students).
I've looked inside stinky mouths for nearly thirty years.	Uttered to me by my dentist during a conversation in which we were comparing our professions. The dentist was attempting to convey to me that his work as a dentist was not as pleasant as mine was (RSF: the "stinky mouths" of his patients).

Yeah, I enjoy my work (<i>said with an ironic tone</i>). I really dig my customers' hang-ups. They keep me from smashing into other cars and poles.	Uttered to me by a New York cab driver with an M.A. in philosophy on the way into the city from La Guardia airport a few years ago. The driver was obviously trying to convey to me that driving a taxi was a boring experience for someone like himself (RSF: the "hang-ups" of his customer's which attenuate the monotony of driving: "they keep me from smashing into other cars and poles").
Yeah, I guess looking into a frying pan all day is, like, OK.	Uttered to me by an adolescent family member commenting upon her parttime job at McDonald's in an obvious attempt to make me understand how boring and mindless her job was, even though she was glad to have it (RSF: a "frying pan" she used as a cook at the restaurant).
It's been, well, a year of studying the burping capacities of the human male.	Uttered to me by a younger family member after a year of marriage, in order to convey to me ironically how hard it had been to get used to her husband's idiosyncrasies. What appeared to irritate and annoy her the most was his burping behavior (RSF: an ironic reference to her profession as researcher: "a year of studying...").

Yup, I've been lucky to have two blue eyes speak to me all these years.	Uttered to me by an older family member to convey to me his appreciation of his wife's laconic nature (RSF: the feature which he emphasized were her blue eyes, since, in all probability, these attracted him to her in the first place.
It's been twenty-five years of huffing and puffing at night.	Uttered by a wife during a silver anniversary party in her and her husband's honor, apparently to convey how marriage had entailed putting up with her spouse's idiosyncrasies (RSF: the huffing and puffing that probably kept her awake at night).
I can't quite get my body cranked up to do it as often and as well as I used to.	Uttered to me by an older family member to relay to me how ageing had decreased his sex urge (RSF: cranking his body which he perceived metaphorically as a gradually deteriorating machine.
He's sixteen...He's at that "I know more than you" age.	Uttered to me by a family member whose son had become a troublesome adolescent. This utterance probably alluded to the incidence of episodes in which the son probably answered his father back aggressively (RSF: the son's apparently caustic "I know more than you" repartee).

Well, she's fifteen, and, incredibly, still hanging around the house even on Saturday nights.	Uttered to me by a colleague whose adolescent daughter was not as socially-oriented as she would have liked her to be (RSF: the reference to Saturday night indicates that the daughter probably did not socialize often even on this ritualistic "going out" evening, suggesting the increased incidence of conflictual episodes on weekends.
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Implications

SF seems to reflect a deeply-engrained psychological need to draw attention to our feelings and attitudes. It is a deliberate strategy that implores the addressee to focus momentarily on the addresser's ego-states or feelings. As Goffman (1978: 814) perceptively remarked a while ago, our utterances often make "a claim of sorts on the attention of everyone in the social situation." Goffman, incidentally, had previously made us aware in a 1959 study how people used verbal discourse strategically to portray themselves in everyday life. He has come the closest, in my view, to identifying SF as a distinct verbal strategy. Deborah Tannen (1989), too, has recently alluded to the fact that thought and emotions are often intermeshed in discourse. She refers to a passage written by Gregory Bateson in which he remarks that in one of his writings he had attempted "to bring the reader into the room." Although she does not call it SF, Tannen (1989: 168) suggests that what Bateson is alluding to is a discourse strategy which constitutes "a way of achieving understanding through involvement."

The study of a phenomenon like SF seems to show that ego-dynamics are at the basis of human cognition. Our affective responses to the world seem to dictate, or, at the very least, guide the choice of the words and structures we continually make in discourse. Like in a novel where the author's feelings and perspective shape the form and contents

of the storyline, so too SF is one of the means by which the "author" of an utterance reveals his or her feelings and perspectives in an artful manner, as Di Pietro has put it.

My intention in this essay has certainly not been to coin yet another technical neologism for the already all-too-cluttered terminological field of discourse analysis. Rather, my desire has been to argue that in offering up SF as a target for consideration and, hopefully, future discussion and research, it will become increasingly more evident that Di Pietro's truly remarkable insights on how to approach the study of communication as a conveyor of our ego-states and goals were on the right track.

References

- Austin, J.L. (1962). *How to Do Things with Words*. Cambridge, Mass.: Harvard University Press.
- Bühler, K. (1934). *Sprachtheorie: Die Darstellungsfunktion der Sprache*. Jena: Fischer.
- Danesi, M. (1982). Idiolect, Dialect, Sociolect: What about "Psycholect"? In: W. Gutwinski and G. Jolly (eds.), *The Eighth LACUS Forum*. Columbia, S.C.: Hornbeam.
- Di Pietro, R.J. (1987). *Strategic Interaction*. Cambridge: Cambridge University Press.
- Farb, P. (1974). *Word Play*. New York: Bantam.
- Firth, J.R. (1951). *Papers in Linguistics, 1934-1951*. Oxford: Oxford University Press.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Garden City: Doubleday.
- Goffman, E. (1978). Response Cries. *Language* 54: 787-815.
- Goodwin, C. and Duranti, A. (1992). Rethinking Context: An Introduction. In: A. Duranti and C. Goodwin (eds.), *Rethinking Context: Language as an Interactive Phenomenon*. Cambridge: Cambridge University Press.
- Goodwin, C. and Goodwin, M.H. (1992). Assessments and the Construction of Context. In: A. Duranti and C. Goodwin (eds.), *Rethinking Context: Language as an Interactive Phenomenon*. Cambridge: Cambridge University Press.

- Halliday, M.A.K. (1975). *Learning How to Mean: Explorations in the Development of Language*. London: Arnold.
- Halliday, M.A.K. (1985). *Introduction to Functional Grammar*. London: Arnold.
- Hymes, D. (1972). Models in the Interaction of Language and Social Life. In: J. Gumperz and D. Hymes (eds.), *Directions in Sociolinguistics: The Ethnography of Communication*. New York: Holt, Rinehart & Winston.
- Jakobson, R. (1960). Linguistics and Poetics. In: T. Sebeok (ed.), *Style and Language*. Cambridge, Mass.: MIT Press.
- Joos, M. (1967). *The Five Clocks*, New York: Harcourt, Brace and World.
- Malinowski, B. (1923). The Problem of Meaning in Primitive Languages. In: C.K. Ogden and I.A. Richards (eds.), *The Meaning of Meaning*. New York: Harcourt, Brace and World.
- Searle, J.R. (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.
- Searle, J.R. (1976). A Classification of Illocutionary Acts. *Language in Society* 5: 1-23.
- Shannon, C.E. (1948). A Mathematical Theory of Communication. *Bell Systems Technical Journal* 27: 379-423.
- Tannen, D. (1989). *Talking Voices*. Cambridge: Cambridge University Press.
- Titone, R. (1977). A Humanistic Approach to Language Behavior and Language Learning. *Canadian Modern Language Review* 33: 309-317.
- Wiener, N. (1949). *Cybernetics, or Control and Communication in the Animal and the Machine*. Cambridge, Mass.: MIT Press.
- Wittgenstein, L. (1922). *Tractatus Logico-Philosophicus*. London: Routledge and Kegan Paul.

SEMANTICS AND MEANING

Representing Polysemy: A Case for Definitions in a Connectionist Network

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Introduction: Dealing with multiple meanings has been the source of considerable controversy in lexical semantics. D. A. Cruse (1986) distinguishes between lexical units--the pairing of a single sense with a lexical item, and lexemes--a collection of lexical units. But this does not help us cope with the distinction between polysemy--a single word with several related meanings--and homonymy--identically sounding words with unrelated meanings. The problem has been how to specify in a rigid way the degree of closeness in meaning that must exist before a case of multiple meanings is deemed to be an instance of polysemy rather than homonymy. Difficulties like this have led many to abandon the possibility of accounting for natural language meaning in a formal way. For example, Lakoff and Johnson (1980), arguing against what they call the objectivist view in linguistics, propose that words are characterized by interactional properties which arise from interactions people have with each other and with the world. One of the positive features of this approach to meaning is that it embraces metaphor as an essential feature of everyday language. However, the abandonment of the effort to formalize word meaning runs the risk of losing out on explaining certain aspects of the psycholinguistic evidence regarding the mental processing of word meaning, as I have previously argued (Gonsalves, 1990). My own view is that both the formal and informal approaches are needed to capture the richness of language in all its aspects and in every area, in semantics as well as in phonology and syntax.

In this paper I would like to discuss some of the many meanings of the English verb "to give." I will propose that a formal approach similar to that of Katz's semantic theory (1972, 1977), especially as more recently elaborated on by Ravin (1990), has the benefit of providing us with devices that help to reveal an

underlying similarity of structure across several quite different senses of this verb, while allowing us to clearly distinguish between these many meanings. I will propose that this structural similarity between different lexical units belonging to the same lexeme can help us to distinguish more clearly between polysemy and homonymy.

I will use a very simplified version of a connectionist network to show how different senses of the verb can be elicited as a function of context. Connectionist networks are very powerful tools that have been successful in helping to account for a host of phenomena in cognitive science (Rumelhart and McClelland, 1986). However, the only important features of connectionist networks that my very simple model uses are the input-output and excitatory-inhibitory notions that are commonplace in such networks. The main reason for my using this approach here is that it helps to lay out in a visually clear manner the inter-relationships between these different senses of the verb.

The Oxford English Dictionary lists 55 different senses of "give." However, it might be the case that some of these supposedly different senses do in fact overlap, especially in the the context of a semantic theory that tries to restrict itself to accounting for literal meaning, as opposed to the connotative and pragmatic aspects of meaning. In fact, with respect to the dozen or so dictionary senses of the verb that I will deal with initially, I will argue that most of these are covered by just two basic underlying senses of the verb.

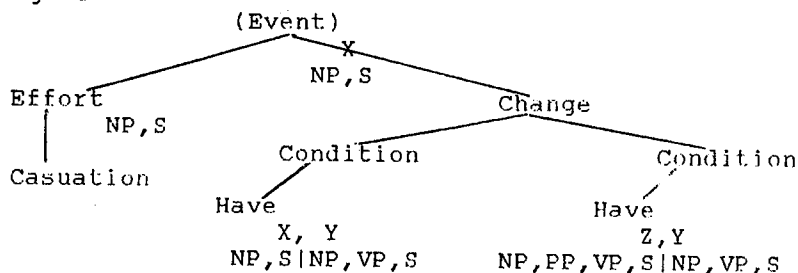
Let us begin by considering just a small sampling of the many uses of this verb gleaned from a variety of sources:

1. give a book.
2. give me the scissors.
3. give my best wishes.
4. give permission.
5. the cow gives milk.
6. give my name and address.
7. give a hug, a kiss.
8. give a spanking.
9. give me five minutes.
10. give an opinion.
11. give the dish a spicy flavor.
12. give a sigh.

As a first approximation we might take it to be the case that the primary sense of "give" is to bring about

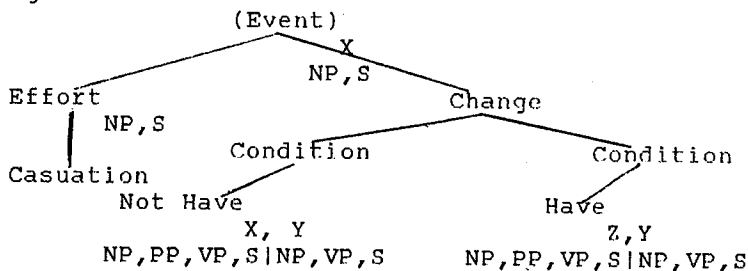
a change in possession of something from the referent of the subject of the verb to the referent of the object of the verb. So in "John gave Harry the book" it would seem that the sense is that John brought it about that the possession of the book was transferred from himself to Harry. With this primary sense in mind, we might propose something like the following semantic marker as denoting this sense of the verb.

13. give



This same sense seems to do fine for (2) also; but for (3), "give my best wishes," there already seems to be a problem, since it doesn't seem to make much sense to say that the giver possessed the best wishes before they were given. Nevertheless, it does make sense to say that the receiver had the best wishes of the giver once they were given. These considerations lead to the following revision of our primary sense of the verb "give," which is just a version of Ravin's marker for the verb "receive," with the condition inverted.

14. give



With this change, this primary sense seems to capture the meaning of (3), but with the proviso that having a book and having someone's best wishes seem to denote different senses of having. In fact, to give your best wishes seems to indicate simply to express those wishes to the addressee. It would be interesting, however, if

it turns out that all of the things we can give, we can also thereby have.

This seems to work for (4) since after we have been given permission by the appropriate authority we are certainly justified in believing that we have it. However, when we look at (5), having no longer seems to be essential. Rather, what this use of "give" suggests is that cows produce milk. The change of condition here is not so much a change in having as it is a change in being.

To give one's name and address, (6) has the sense of providing information. But here the change in having is still different from our first impression of the meaning of "give" since here the giver does not lose possession of the thing that's given. Nevertheless, this sense of give seems consistent with (14).

(7) and (8) seem to be quite different from the other senses of "give" we have looked at so far. Giving a kiss, a hug, or a spanking means just doing to some recipient the action denoted by the object of the verb. Here there does not seem to be any bringing about or causing of some change in condition; there is only doing something to someone or something.

In (9), "give me five minutes," we are back to a sense similar to the earlier examples, but here we have the sense of assigning or allotting something that can be measured. This use of give does, however, carry the basic sense of "give" outlined in (14).

"Give an opinion," (10), seems to be most similar to both (3), "give best wishes," and (6), "give my name and address." It is probably closer to (3), perhaps because opinions tend to have more expressive or emotional content than raw information. Again, the underlying structure of (14) corresponds roughly to this sense of "give."

(11), "give a dish a spicy flavor," suggests some form of transformation in the quality or characteristic of a thing, but again (14) works quite well.

Finally, (12), "give a sigh," is very much like (7) and (8). Here the giving is simply the doing of the action denoted by the object of the verb. As with (7) and (8), no causing of a change is indicated by this sense of "give."

To sum up these observations of this small sampling of uses of the verb "give," there is an underlying sense, namely as represented in (14), that applies in most of the examples. One significant departure from (14) is the sense that covers examples like "give a hug." The sense of give with examples like this is quite different from the others since it

does not imply the bringing about of any kind of change. All the other examples denote a change, and all of them apart from (5), "the cow gives milk," seem to correspond to a change involving some sense of "having," of going from not having to having. To my intuitions the change in (5) has to do with bringing something into existence. But perhaps this can be glossed as yet another sense of having, whereby it means to have something somewhere in the world.

To capture these senses of "give" I have created the network on the following page. The basic idea is that semantic information about the direct object of the verb is input into the network which then yields the appropriate sense. The basic semantic components of (14) are nodes in this network, with the nodes following the change node indicating in a more general and less formal manner the type of change that is involved. The plus and minus signs correspond to excitatory and inhibitory connections, respectively, and ensure that the single appropriate sense of the verb is selected by the network given the input. So our examples (1) and (2) would both get the sense of transferring something since the things that are given are objects. (3) and (10) would carry the sense of expressing, while (4) would get the sense of granting. (5) gets the sense of producing and (6) of providing. (7), (8), and (12) denote an action. Finally, (9) involves assigning, and (11) transforming.

Conclusion:

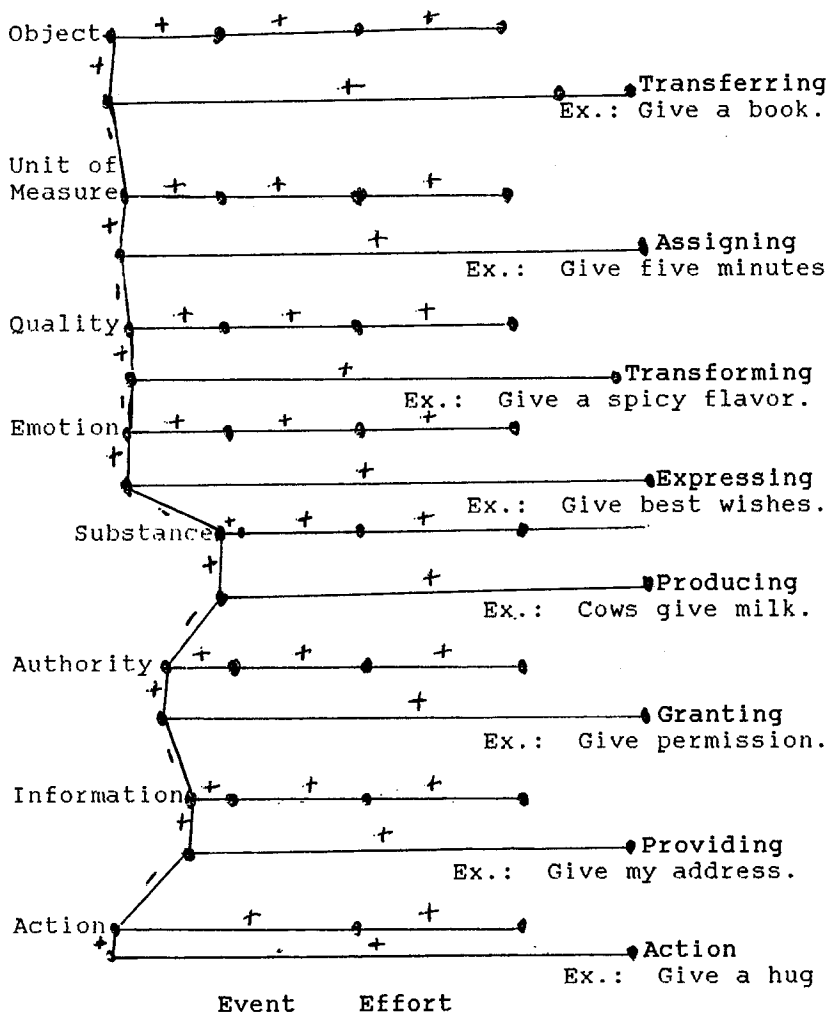
This review of a sampling of the use of the verb "give" has revealed a surprising degree of commonality underlying the surface meanings of these uses. The basic structure in (14) holds for a large set and helps to distinguish this set from the rest which denote an action. I would suggest that this type of structural variation be used as a way of distinguishing between homonymy and polysemy. The simple network presented here is an attempt to show that a definitional semantics can account quite well for troublesome aspects of word meaning like polysemy, and that it can accomplish this in a revealing manner.

Network for Several Senses of "Give"

Contextual Info

Semantic Components

Event Effort Causation Change



REFERENCES

Cruse, D. A. 1986. Lexical Semantics. Cambridge, England: Cambridge University Press.

Gonsalves, R. J. 1990. The representation of word meaning. in Program of the Twelfth Annual Conference of the Cognitive Science Society, 463-470.

Katz, J. 1972. Semantic Theory. New York: Harper and Row.

Katz, J. 1977. Propositional structure and illocutionary force. New York: Thomas Y. Crowell Co.

Lakoff, G. and M. Johnson. 1980. Metaphors we live by. Chicago, University of Chicago Press.

Ravin, Y. 1990. Lexical Semantics Without Thematic Roles. Oxford, Clarendon Press.

Rumelhart, D. E., McClelland, J. L., and the PDP Research Group. 1986. Parallel Distributed Processing: Explorations in the Microstructure of Cognition; Volume 1. Cambridge, MA: MIT Press.

TOWARDS THE MEANING OF THE NOMINATIVE IN POLISH

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In his 1958 paper *Morfologiceskie nabljudenija nad slavjanskim skloneniem* Roman Jakobson defends and elaborates the hypothesis he had put forward in 1936 in his *Beitrag zur allgemeinen Kasuslehre*, an article which provoked a heated discussion among linguists at the time (see Kurylowicz 1949), that every case in the case-system of a given Slavic language has a unique core meaning all observed uses of this case can ultimately be reduced to. The distinction Jakobson makes between "intension, the INVARIANT general meaning of any case within the given declensional system, and extension, the contextual, syntactically and/or lexically conditioned VARIANTS in the actual application of the case in question" (Jakobson 1958: 179) is remarkably similar to the opposition between the potential meaning of a morphological form in langue and the actual realizations (expressive effects) of this meaning in tongue (discours) that is fundamental to Guillaume's theory of grammatical semantics (Guillaume 1964) pursued at Laval University in Canada. A contemporary Australian advocate of grammatical semantics, Anna Wierzbicka, admits of being heavily influenced and inspired in her research on cases by Jakobson's hypothesis (Wierzbicka 1988: 391). This attractive hypothesis has undoubtedly influenced the present author as well, who in this paper will discuss several uses of the Polish nominative attempting to show that all of them are different manifestations of one underlying meaning contained in the concept of IDENTIFICATION.

In the most complete account of the Polish case system in existence to date, furnished by Adam Heinz (1965) in terms of the linguistic theory developed in the writings of Kurylowicz (see Kurylowicz 1986), the nominative is described as the least problematic Polish case, a typical member of the class of "syntactic" cases (see Kurylowicz 1949), whose primary syntactic function, that of the subject, determines its syntactic and semantic characteristics which follow from the fact that the nominative is the formal representative of the category of noun as such (Heinz 1965:89). In other words, in Heinz's description, the Polish nominative has no

"concrete" relational meaning, i.e. it does not express any semantic relations such as the relation of apparence or origin expressed by the genitive (*kapelusz ojca*= the father's-Gen. hat) or the relation of the instrument or companion expressed by the instrumental (*pisac piórem*=write with a pen-Instr. *pracowac z kolega*=work with a friend-Instr.), etc. The semantic characteristic of the nominative is totally subordinated to its syntactic characteristic, and the only meaning one could suggest for this case is the grammatical meaning of the syntactic functions the nominative is used in. The three syntactic functions represented by the nominative in Polish are illustrated in example (1). The function of the subject, as in example (1a), is the case's primary function, while the functions of the appositive and predicative attributes, illustrated in examples (1b) and (1c), respectively, represent the nominative in its secondary syntactic role¹.

- 1a. Ojciec wyjechał.
Father-Nom. left.
- 1b. Brat lekarz polecił mi ten szpital.
Brother-Nom. doctor-Nom. recommended me-Dat. this hospital.
'My doctor brother recommended this hospital to me'.
- 1c. Ojciec jest fachowiec dobry.
Father is a good specialist-Nom.

(Heinz 1965:89)

The meaning of the nominative in these examples follows from the grammatical meaning of the syntactic functions the case signals, and as such, argues Heinz (1965:34), it corresponds to the general meaning conveyed by the part-of-speech categories of the noun and the adjective. In example (1a) the semantic function of the nominative on the subject is the same as the semantic function of the subject noun: to denote (or name) the person to be talked about in the sentence. In examples (1b) and (1c) the nominative appears on the nouns functioning as "attributes" (my translation of the Polish term *określnik* used by Heinz), i.e. nouns that are used in the functions primarily fulfilled by adjectives. The noun *lekarz* (=doctor) appearing in apposition to the noun *brat* (=brother) in example (1b) and the noun *fachowiec* (=specialist) describing the significate of the subject noun *ojciec* (=father) through the structure of predication in example (1c) have both lost their nominal character. They have ceased to name things, a natural semantic function of nouns, and have come to be used as names of qualities, a semantic function typical of adjectives. The nominative-marked nominal attributes

doctor and specialist used in the structures of attribution and predication (in examples 1b and 1c, respectively) denote only one of the potential qualities the significates of their respective subject nouns possess: the profession of the brother in example (1b) and the field of specialization of the father in example (1c).

It seems to me that this structure-oriented approach does not explain why the nominative, and not any other case is used on nominals in the apposition and predication structures of examples such as (1b) and (1c). The principle of case agreement between the modifying and the modified nominal element explains the presence of the nominative in examples (1b) and (1c), but will not explain the more natural use of the instrumental in Polish predicative nominals such as the nominal *fachowcem* (=specialist-Instr.) in example (2):

2. Ojciec jest dobrym fachowcem.
Father is a good specialist-Instr.

Also, Heinz's structure-biased account of the Polish nominative ignores certain specific semantic functions following from the underlying core meaning of this case. Jakobson's semantic approach postulating the existence of such general meaning allows for a uniform semantic interpretation of the role of the nominative both in its primarily syntactic uses and in sentences where it does not appear on the grammatical subject, the nominal appositive to the subject or the nominal predicate. The data discussed in this paper are restricted to the various occurrences of the nominative in Polish proper nouns denoting family names, names of places and names of nationalities. The meaning conveyed by the nominative in these examples comes to light when sentences with the nominative are contrasted with sentences with another case employed in the same context. It is argued that the nominative on Polish names is used when a need arises for unambiguous or additional IDENTIFICATION of the entity referred to by the name in question.

Sentences in example (3) illustrate the obligatory use the nominative with non-adjectival family names used in reference to the members of the human 'weaker' sex, i.e. the female bearers of the name. While the non-adjectival family name of a man declines in accordance with the demands of the syntax in the sentence, the same family name used with reference to a woman resists the rules of government and/or agreement and has to remain in the nominative.

- 3a. Chciał¹bym rozmawiać z panem Nowakiem.
I would like to talk to Mr.-Instr. Nowak-Instr.
- 3b. Chciał¹bym rozmawiać z panią Nowak.
I would like to talk to Mrs.-Instr. Nowak-Nom.

In both sentences of example (3) the family name is preceded by the relevant common noun (pan/pani= Mr./Mrs.) specifying the sex of the referent. This common noun appears in the instrumental, the case required by the verbal phrase rozmawiać z (= talk to). When reference is made to the male bearer of the name, the common noun title pan (=mister, sir) can be omitted in informal speech, as illustrated by example (4a), and no ambiguity as to the identity of the person referred to will arise. The masculine instrumental ending -em will indicate the sex of the name's bearer clearly. The omission of the noun pani (mrs./lady) is impossible before a non-adjectival name of a woman. Non-adjectival family names, i.e. names which have no gender marking suffixes -ska, -owa, -ówna to indicate that the name refers to a woman, have to be preceded by a qualifying declinable noun when a female bearer of the name is evoked. A noun indicating the woman's title and sex such as pani/panna (= Mrs., Miss) or a declinable Christian name is used for this purpose. (See examples in 4c). If a common noun of this kind is not present, the reference is obscured. It could be said that the nominative on the family names referring to women identifies the referent by giving their name in its full form, undistorted by declension. At the same time, however, another grammatical element is needed in the sentence to convey information pertaining to the sex of the surname's bearer.

- 4a. Widział¹em Nowaka/Kowalskiego w kinie.
I saw Nowak-Acc.(man)/Kowalski-Acc.(man) in the movies.
- 4b. Widział¹em * Nowak/Kowalską w kinie.
I saw *Nowak-Nom.(no sex indication)/Kowalska-Acc.(woman) in the movies.
- 4c. Spotkał¹em panią Nowak/ Ewę Nowak/ *Nowak na konferencji.
I met Mrs.-Acc. Nowak-Nom./ Eva-Acc. Nowak-Nom./ *Nowak-Nom. at the conference.

In the next group of examples, the nominative appears on proper nouns denoting names of places. When the place name is not preceded by a common noun denoting the type of place: province, state, town, village,

airport or train station, it is assumed that the place is familiar to the listener, and its name then declines easily, as illustrated by sentences (a) in examples 5, 6, 7 and 8. When the place is small and /or not familiar to the listener, a qualifying common noun must be present, and the place name appears in the nominative, as illustrated by sentences (b) in examples 5, 6, 7, 8. The function of the nominative in the b-examples of this series is similar to the function of the nominative in women's family names: it identifies the place referred to by name, quoted in its basic, undeclined version. When the name of a place in a non-subject position is given in the nominative, one can conclude that the place in question is small and/or not known to the listener. The nominative-marked proper name in such sentences has to be preceded by a common noun appearing in the case required by the structure of the sentence.

- 5a. Urodziłem się w Nowym Yorku.
I was born in New-Loc. York-Loc. (= New York City)
- 5b. Urodziłem się w stanie Nowy York.
I was born in the state-Loc.(of) New-Nom. York-Nom.
- 6a. Wylądowałem na Okęciu.
I landed at Okęcie-Loc.
- 6b. Wylądujesz na lotnisku Okęcie.
You will land at the airport-Loc. Okęcie-Nom.
- 7a. Spotkamy się w Koluszkach.
We will meet in Koluszki-Loc.
- 7b. Jadę do miasteczka Koluszki.
I am going to the small town-Gen. (of) Koluszki-Nom.
- 8a. Wsiądziesz w/na Warszawie Główniej.
You'll get off at Warszawa-Loc. Główna-Loc.
- 8b. Wsiądziesz na stacji Warszawa Główna.
You'll get off at the station-Loc. Warszawa-Nom. Główna-Nom.

Usually, when the name of a big town or city known to the listener is preceded by a qualifying common noun, both the common noun and the name of the place are declined, as manifested by examples (a) in 9 and 10; when the place is small, and its name is preceded by such common nouns as *miasteczko* (= a small town), *wioska* (= a village) or *dzielnica* (= a district), only the common name is declined, the place name remaining in the nominative, as illustrated by examples (b) in 9 and 10:¹

- 9a. Przemawia prezydent miasta Warszawy.
The president of the city-Gen. of Warsaw-Gen. is speaking.
- 9b. Ludzie zebrali się na rynku miasteczka Nieszawa.
People gathered in the market place of the small town-Gen. (of) Nieszawa-Nom.
- 10a. Jan pochodzi z miasta Łodzi.
Jan comes from the city-Gen. (of) Łódź-Gen.
- 10b. Wyrosłem w dzielnicy Kazimierz.
I grew up in the district-Loc. (of) Kazimierz-Nom.

In the last group of examples, quoted in (11) and (12), the nominative appears on the proper noun denoting nationality or origin, and it is contrasted with the instrumental in the same structure of nominal predication. I would like to suggest that the nominative in these examples IDENTIFIES the person denoted by the sentence subject as such, while the instrumental on the same name, in the same grammatical context, indicates only one of the descriptive characteristics of the person denoted by the subject. When somebody says *Jestem Polak* (= I am a Pole-Nom.), as in example (11a), the noun *Polak* in the nominative case evokes all the qualities associated with the notion of belonging to the Polish nation. The speaker seems to be implying that if you know his nationality you know who he is. A similar semantic relationship can be found in the English metaphorical expression *Style is the man*. When the instrumental appears on the predicative nationality noun (*Polakiem* in example 11b), only one of the potential qualities of the subject's referent is brought to mind: his nationality. The nominative here has the identifying force the instrumental clearly lacks. English translation equivalents appear significant in this example. While the English translation of the sentence with the nominative-marked nationality noun in the structure of predication prefers the noun equivalent *Pole*, the instrumental-marked predicative nominal is rendered by the nationality adjective *Polish*.

- | | |
|--------------------|---|
| 11a. Jestem Polak. | cf. "Kto ty jesteś?
Polak mały." |
| I am a Pole-Nom. | "Who are you? A
little Pole."
(a popular children's
rhyme) |
- 11b. Jestem Polakiem.
I am a Pole-Instr.
= I am Polish; I am of Polish nationality.

The interpretation of the contrastive examples in (12) is similar: the nominative on the noun *krakowianka* (= Cracovian, +female), denoting the place of origin in sentence (12a) identifies the person evoked by the subject as somebody whose complete characteristic follows from the fact that she was born and raised in Cracow. The instrumental appearing on the same noun in example (12b) evokes one of the many possible characteristics of the person denoted by the subject: her place of birth.

12a. "Jestem sobie *krakowianka*."

"I am to myself-Dat. a Cracovian girl-Nom."

(a popular song from the area of Cracow)

12b. *Jestem krakowianką*.

I am a Cracovian girl-Instr. (= I come from Cracow)

To conclude this discussion of the Polish nominative it could be said that the data considered here confirm the hypothesis made at the beginning, which agrees with the conclusion concerning the core meaning of the nominative reached by Wierzbicka (1988: 460) that the underlying meaning of the Polish nominative case is related to the general concept of identification with reference to the evoked person or object. When a Polish proper noun denoting a family name, place or nationality appears in the nominative against the principle of case agreement, the name is given additional prominence thus diminishing the chance of possible ambiguity as to the identity of the person or object denoted by this name. A complete semantic description of the Polish case-system verified against a representative body of data will confirm the generalizations made in this presentation.

NOTES

1. The nominative has been traditionally described as the case representing the syntactic function of the subject. This perception follows from the grammatical use this case is put to most frequently in Polish sentences, yet it should not be assumed that the function of the grammatical subject in Polish is always indicated by the nominative, for the genitive (*Wody przybywa.* = the water-Gen. is rising.) or the dative (*Spało mu się dobrze.* = It slept itself well to him-Dat.) can also be used in this syntactic role. (For a detailed discussion see Heinz 1965: 63-68 and Gołąb 1958).

2. The grammatical form of the place name in this group of examples seems to play an important role. When the name consists of two words (Nowy Targ), when it has the form of a plural noun (Koluszki), or when it has the neuter noun ending -ice (Katowice, Gliwice), even if the place is big or well known to the listener, its name will appear in the nominative when a preceding qualifying noun is present. Cf:

1. Chodziłem do szkoły w mieście Nowy Targ.
I went to school in the town-Loc. (of) Nowy-Nom.
Targ-Nom.
2. Wczoraj zmarł burmistrz znanego powszechnie miasta
Koluszki.
Yesterday died the mayor of the well-known town-Gen.
(of) Koluszki-Nom.
3. Mecz wygrała reprezentacja miasta Katowice.
The game was won by the representation of the city-
Gen. (of) Katowice-Nom.

REFERENCES

- Gołąb, Z. 1958. "Problem podmiotu", *Biuletyn PTJ*, z. XVII, 19-66
- Guillaume, G. 1984. *Foundations for the Science of Language*, Amsterdam and New York: John Benjamins
- Heinz, A. 1965. *System przypadkowy języka polskiego*. Kraków: Uniwersytet Jagielloński
- Jakobson, R. 1936/1971. "Beitrag zur allgemeinen Kasuslehre". In his *Selected Writings*, vol. 2, The Hague: Mouton, 21-71
- Jakobson, R. 1958/1971. "Morfologiceskie nabljudenija nad slawjanskim sklonenijem". In his *Selected Writings*, vol. 2, The Hague: Mouton, 154-183
- Kuryłowicz, J. 1949. "Le problème du classement des cas", *Biuletyn PTJ*, z. 23, 20-43
- Kuryłowicz, J. 1987. *Studia językoznawcze*. Warszawa: PWN
- Wierzbicka, A. 1988. *The Semantics of Grammar*. Amsterdam: John Benjamins

CASE AND CREATIVITY:
A NEW LOOK AT THE SEMANTICS OF CASE IN SLAVIC

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As Brecht and Levine state in their dedication of the book Case in Slavic to the memory of their brilliant teacher, "(Roman) Jakobson's basic studies on case in Russian (Jakobson 1936 & 1958--RHM) continue to serve as the basis, or the foil, for most work done on Slavic case" (Brecht/Levine 1986: 3). This has been true regardless of theoretical model worked in.¹

Coming as he did out of the Prague School tradition, J saw as his primary goal determining the semantic load of the case endings in Russian--what inflected nominal forms add to the meaning of an utterance. To this end, he₂ posited a set of three distinctive semantic features₂, which (he claimed) "mapped directly onto morphological forms" (Brecht/Levine 1986: 29). Each case is marked or unmarked for each feature, and thus uniquely opposed to all the others:

	Directional	Quantifier	Peripheral
Nominative	-	-	-
Accusative	+	-	-
Genitive	-	+	-
Prepositional	-	+	+
Dative	+	-	+
Instrumental	-	-	+

Directional cases³ "signal the goal of an event"; the quantifiers "focus upon the extent to which the entity takes part in the message"; and peripheral cases "assign the entity an accessory place in the message" (Jakobson 1958: 158).

The use of distinctive features and the concept of markedness is modeled, of course, on the advances made in phonology in the 1940s and '50s, but the question arises: is this methodology suitable for discussing semantics? A cogent argument for this approach can be found in Brecht/Levine 1986 (21): "... the individual cases of a language are not atomic units, but enter into a system of correlative and oppositional relations with one another"; J's features "... uniquely define each case on the basis of those features which it shares or does not share with the other cases". But as

Chvany points out (Chvany 1986: 124), any three features can specify the Russian cases uniquely--that does not perforce mean they accurately describe them: ". . . for the descriptive task, accuracy is more important than economy . . ."

In fact, as Chvany 1986 demonstrates, J's model, alluring though it may be, presents considerable problems.⁴ I would argue that it is at once too powerful, and too rigid: three binary features can specify not just six cases, but eight, and this inevitably led J to elevate two dubious morphological phenomena in Russian (the so-called "second prepositional" and "second genitive") to the status of full-blown case.⁵ And, of course, if we limit ourselves to three features and three features only for the sake of descriptive elegance, we in turn limit what we can say about the system.

One can also argue with the specific distinctive features J chose to define the cases. Intuitively (though not all would agree--see Chvany 1986: 122 & 127, fn. 4), it makes sense to group A and D together under the mark +Directional; after all, it is enough to point out that both cases can show destination after a motion verb. However, Chvany indicates that the two cases ". . . almost never alternate in cognitively synonymous sentences, and (that) the functional load of the contrast is very low" (Chvany 1986: 122-23).

I see precious little intuitive connection between G and P, however. The contexts in which they are used are generally quite dissimilar, and for all intents and purposes are mutually exclusive.⁶ Therefore, J's feature +/- Quantifier comes across as vague, at best, and frankly ad hoc (although, as we shall see, it works fine for G alone). J obviously invoked it in order to account for homonymy between G and P in the Russian plural adjective, the plural pronouns, and certain numerals.

Morphological variation in some Slavic dialects (see Miller 1990 & 1991) supports the notion of a semantic link between D, P, and I, but is this connection J's feature +Peripheral? I have pointed out in my work on Slovene that, if we define +Peripheral as "expresses relationships that stand outside the predicative core of the sentence", then D is hardly as "peripheral" as P or I (Miller 1990: 17). We might also ask if this is really a semantic feature at all--it could be argued that this is rather a syntactic property, a statement about how these cases are used, not what they mean. In this connection, I have suggested elsewhere that the

notion of "peripherality", as described above, might be better described in terms of a continuum, not two groups separated by stark + and - (Miller 1991: to appear).

But for all of this, J's fundamental intuition was surely correct: the Russian (Slavic) cases must carry their own semantic load, which they impart (through their formal expression, the case endings) to the sentence. One year of college Russian is enough to convince the perceptive student that the cases are not just arbitrary catalogues of unrelated functions: there is something binding these functions that is intuitively satisfying. Also hardly arbitrary is the behavior of case endings in dialects: variation among competing endings seems at times to be guided by semantic considerations (for discussion, see Miller 1990 & 1991). In short, the way a heavily-inflected case language behaves clearly suggests that case morphemes are hardly semantically empty units, as most generativists would have it.

A NEW APPROACH TO CASE SEMANTICS IN SLAVIC

I would here like to propose a new approach to the problem, one that is more firmly anchored in the actual functions of the cases. I assume, with J, that each case has an invariant core meaning that is transmitted whenever the case is used. I reject, however, J's use of distinctive features and the notion of markedness. I argue, rather, that each case is definable on its own terms, without having to refer to any other case: for example, it is sufficient to say that G is "marked" +G, without having to redundantly specify that it is also marked -D, -P, etc. The systematicity of Russian case can be seen in these redundant oppositions, as well as in secondary qualities which oppose certain cases, and which cannot be described as "distinctive features" in the Jakobsonian sense (see below on D vs. A, and on locational expressions in G, P, and I).

To arrive at the core meaning of each case, I propose we simply list the main uses of each case, ascertain the threads that connect them, and formulate the core semantics of each case on the basis of these threads. To take a simplified example, let us consider A, which in Russian denotes, *inter alia*, the direct object of a transitive verb, and motion into or onto: e.g., "Ja čitaju knigu--I read the/a book"; "Ja jėdu v gėrod--I'm going to town". Comparing these contexts suggests a core meaning of: "denotes entity into or onto which the action passes; implies subject coming

into physical contact with entity". Indeed, that is what literally happens in our two examples, and in many other contexts in which A is encountered, as well. The next stage, which the present work will not embark upon to any extent, would be a rigorous testing of the definitions thus arrived at by applying them to all of the contexts in which the given case is used, and a reformulation of the definitions when necessary. Various experiments to test our core meanings further also suggest themselves: for instance, native speakers could be presented with a list of newly-coined verbs which are briefly defined in neutral language, and then asked to determine what case--with or without preposition--the new locutions would take. This methodology should also facilitate historical and comparative studies of case, since the core semantics would emanate from actual case usage.

But there is another dimension here. Consider the sentence "Iván okázývajeť vlijánije na svoix továřiščej --Ivan exerts an influence on his comrades". Where is the "physical contact" in this sentence? How can an abstract "action" like "exert" "pass into or onto" an abstract quality like "influence"? I would suggest that here we pass from the realm of the concrete and literal, to the realm of the figurative. Let us assume that Russian speakers have regularly extended the cases into new contexts based on metonymy and metaphor. In the above example, an abstract action is being presented on some level as if it were a physical one. (At this point, this seems to be due to the fact that Russian has only certain grammatical means at its disposal--the cases seem to have originally implied spatial relations, and there is no case for handling abstractions.) But it is also at least conceivable that such utterances also contain an image--perhaps weak, perhaps unretrievable for most speakers--of physically doing something to a concretized notion, in this case literally passing on some concrete thing called "vlijánije". This idea, I would argue, is also testable, and need not represent a slide down the slippery slope of subjectivity.

Let us now list some of the functions of each of the six Russian cases, and try to adduce the core meaning that they all point to (bearing in mind that these definitions will undoubtedly change after subsequent testing). In the list below, case uses with prepositions are denoted by *. This section will be followed by commentary, where I will try to indicate some of the problems this type of analysis will have to contend with. Let me reiterate that this should all be viewed

as a tentative first step in what I believe is a very promising direction. The reader would do well to regard this piece as a series of question marks, not exclamation points!

NOMINATIVE

Major Functions: grammatical subject; predicate nominal; various kinds of attributes; vocative.

Core Meaning: none; names subject, specifies it as focus of the speaker's attention.¹⁰

ACCUSATIVE

Major Functions: direct object of transitive verb; motion: into*, onto*, under*, behind*, across(*), through*; distributive*; discussive ("about")*.

Core Meaning: denotes entity into or onto which an action passes; implies that the subject comes into physical contact with entity (cf. Kuznecov/Borkovskij 1965: 471).

GENITIVE

Major Functions: adnominal attribute (incl. "possessive"); subject or direct object w/negation; partitive; ablative*; location nearby*; motion past*; comparative ("than"); "without"*; before*, during*, after*.

Core Meaning: disengages entity from core of sentence; can remove entity entirely, make it vague, or show it in some vaguely delineated position (cf. P & I).

PREPOSITIONAL

Major Functions: location: in*, on*, attached to*, in presence of*; discussive*.

Core Meaning: static location within or upon entity; suggests direct, physical contact with entity (cf. A & I).

DATIVE

Major Functions: indirect object (addressee, recipient, etc.); direction towards*; motion around surface*; distributive*; discussive*; "in spite of"*.

Core Meaning: entity towards which an action, etc., is being directed.

INSTRUMENTAL

Major Functions: instrument or means by which an action is performed; agent in passive; predicate nominal (esp. in non-present; see below); location: above*, below*, in front of*, behind*, between*, alongside*; "(along) with"*; equative ("as, like, in the capacity of").

Core Meaning: suggests circumstances attendant on oth-

Core Meaning: per members of sentence, incl. specific, non-contiguous location (cf. G & P).

COMMENTS, PROBLEMS

A & D as "Directional" Cases

Above, we discussed the problems connected with J conjoining A and D under the rubric +Directional, despite the intuitive bond between the two cases. The present analysis captures this paradox: both cases do indeed denote the recipient of some action, but A implies that physical contact is made, while D suggests only that some action, emotion, physical sensation, etc., is being directed at the entity. A rather subtle distinction, but this may be why there is never any syncretism between these two cases in Russian, and why there are the syntactic differences that Chvany alludes to.

Genitive as Quantifier

Only after writing this section did I really understand what J meant by "+/- Quantifier"! Almost all genitive constructions seem to be connected with vagueness, or absence, or removal: the partitive genitive denotes a vague quantity of the entity ("some"); the location it can show is vague location ("somewhere in the general vicinity of"); it shows the absence or non-existence of an entity (cf. "Net nikakíx déneg!"-- "There is no money!"); and in its ablative uses, it denotes the place that the subject is leaving.

The relationship between G and A has been the subject of much research.¹² This relationship can be captured by a few simple diagrams, which in turn illustrate the core meaning of G:

ACCUSATIVE

výpit' "drink (up)"	----->	0 pívo "beer"-A
		"drink all the beer"
čítát' "read"	----->	0 knígu "book"-A
		"read the/a book"
idít' v "walk into"	----->	0 górod "town"-A
		"walk (in)to town"

The action brings the subject in touch with the entity: he/she consumes all of the beer, reads in a book, comes to be physically present in the town.

tions in which o/ob takes A: "operét'sja o sténu--
lean against the wall" (also consider a relatively rare
construction with P: "stol o tréx nóžkax -a table with
three legs"). Finally, one of the meanings of the pre-
fix o/ob- is "action or motion applied to entire sur-
face of object" (ORED: 415; my emphasis). I would
therefore suggest that o/ob "about" represents a figur-
ative extension of the P concept of contiguity, offer-
ing an image of "surrounding or covering the subject of
discourse".¹³

As for pri, a preposition used in a variety of
seemingly unrelated contexts, it seems that the origi-
nal meaning in Russian was "attached to, branching off
of", with its most common current meanings ("in the
presence of, during the time of, affiliated with")
spinning off from these metaphorically. As a prefix,
pri- often retains this sense: cf. "pristróit' kómnatu
k dómu--add a room to a house", "priití na rabótu--ar-
rive at work". Significantly, verbs with this prefix
could take P without a preposition in Old Church Slavo-
nic (as could verbs with the prefix na-, and verbs of
touching; Lunt 1974: 130).

Other Problem Areas

Space does not allow us to consider the following
questions in this paper: how does the semantic system
we have presented here map onto Russian nominal morpho-
logy? How can it handle variation among competing
forms in the dialects? How can we analyze the rich
variety of time expressions in Russian using this sys-
tem? And how should we approach the semantics of case
government? Finally, how can we objectify the notion
of creativity discussed above, so as to make our stud-
ies scientifically valid?

There is much that needs to be done in the study
of case, whether one accepts these proposals or not.
Let us, however, attempt to focus more on the "endless
creativity" (to borrow a phrase that J himself once used
to characterize language use) that speakers bring to
their language.

NOTES

1. Chvany 1986 briefly discusses the migration of J's
features into generative grammar (118); also cf. Ca-
rol Neidle's work in Lexical Functional Grammar.
2. In Jakobson 1958 (159), J sneaks in two more fea-
tures (+/-Indefinite, +/-Direct) with little com-
ment; I will not touch upon them here. For discus-
sion of their putative significance, see Chvany

2. 1986: 120-25.
3. Some investigators prefer the term "ascriptive"; see Chvany 1986: 127, fn. 4.
4. Chvany goes to some lengths to remind us that J's proposals were in fact tentative, that it was later scholars who "replaced his question marks with periods" (Chvany 1986: 107-108). Her own critique focuses on the problems involved with trying to match form with function using J's features, and the subsequent incompatibility of different representational models.
5. Both "cases" are represented by exceptional forms in small groups of masculine nouns (these do not overlap to any extent), and, in the case of PII, by accidental phenomena in third-declension feminines. For a discussion of the theoretical problems connected with trying to integrate GII and PII into J's system, see Chvany 1986: 110ff. Of course, the fundamental issue here is of tremendous theoretical importance: does different form ipso facto mean different category? Many linguists insist that, in fact, this is so, and that therefore Russian does indeed have (at least) eight cases (see, for example, Mel'cuk 1986: 55-56, and fn. 12). On the other hand, PII is clearly a formally limited category, and GII is beyond merely "limited"--it is nearly extinct.
6. G is used in a wide variety of bound and unbound contexts, P with a limited number of prepositions only. Specific uses of both cases are outlined below.
7. See discussion in Brecht/Levine 1986: 22-25.
8. A reading of the relevant sections of Kuznecov/Borkovskij 1965, a standard handbook for the history of Russian, discloses surprising continuity in the use of the cases over the centuries. Crucial areas for future studies include: prepositions and verbs that now govern different cases than in the past, and functions that now occur more (or less) widely than before.
9. For a fundamentally different approach to the semantics of A with such verbs, see Chvany 1986: 127, fn. 4.
10. Cf. the characterizations of the cases in Lunt 1974: 126-32.
11. Space does not permit me to go into detail on G, which is by far the most fascinating of the cases. Suffice it to say that two of the most basic uses of G (possessive, and after numbers) can be analyzed from this point of view. Incidentally, it is also interesting that only G can form antonyms to constructions in all the other cases.

12. See, for instance, Corbett 1986, and Chapter 2 in Neidle 1988.
13. Conversely, the A discussive with pro would suggest "cutting clear through" a subject" (cf. the semantics of the homonymous prefix), while the D discussive with po would imply "traversing the entire surface" of a subject.

REFERENCES

- Brecht, R.D. & J.S. Levine. 1986. "Case and Meaning", 17-34 in CIS.
- Chvany, Catherine V. 1986. "Jakobson's Fourth and Fifth Dimensions: On Reconciling the Cube Model of Case Meanings with the Two-Dimensional Matrices for Case Forms", 107-29 in CIS.
- CIS. Case in Slavic. Brecht, R.D. & J.S. Levine, eds. Columbus: Slavica, 1986.
- Corbett, G.G. "The Use of the Genitive or Accusative for the Direct Object of Negated Verbs in Russian: a Bibliography", 361-72 in CIS.
- Jakobson, Roman. 1936. "Beitrag zur allgemeinen Kasuslehre: Gesamtbedeutungen der russischen Kasus", rpt. in Selected Writings II (The Hague: Mouton, 1971), 23-71.
- . 1958. "Morfologiĉeskie nabljudenija nad slavjanskim sklonenijem", rpt. in Selected Writings II, 154-83.
- Kuznecov, P.S. & V.I. Borkovskij. 1965. Istoriĉeskaja grammatika russkogo jazyka. Moscow: Nauka.
- Lunt, Horace G. 1974. Old Church Slavonic Grammar. The Hague: Mouton.
- Mel'cuk, Igor. 1986. "Toward a Definition of Case", 35-85 in CIS.
- Miller, Raymond H. 1990. "Form and Function of the Peripheral Cases in Some Slovene Dialects: Preliminary Observations", Slovene Studies 12/1, 5-22.
- . 1991. "Paradigm Restructuring in Slovene Dialects: A Case of Case Semantics in Slavic", The Eighteenth LACUS Forum, to appear.
- Neidle, Carol. 1988. The Role of Case in Russian Syntax. Dordrecht/Boston: Kluwer Academic Publishers.
- ORED. Oxford Russian-English Dictionary. Oxford: Oxford University Press, 1984.
- Vasmer, Max. 1971. Etimologiĉeskij slovar' russkogo jazyka III. Moscow: Progress Publishers.

SYNTAX

FUNCTION ASSIGNMENT IN ARABIC SYNTAX

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1. Introduction

This paper describes the mode of assigning semantic, syntactic, and pragmatic functions to constituents in Standard Arabic (henceforth SA.) It is argued that constituents in SA are assigned functions in accordance with relations exhibited in three systems: the transitivity, mood, and theme systems (Halliday, 1985.) It is shown that relations between elements in each system determine a different set of functions. Semantic functions, such as agent, patient, and goal, are determined by relations in the transitivity system. Syntactic functions, such as subject and predicate, are determined by relations in the mood system. Pragmatic functions, such as theme, topic, and focus, are determined by relations in the theme system.

It is demonstrated that a constituent in SA can be simultaneously assigned a number of functions in a sentence. Accordingly, a constituent may be assigned the functions of agent, subject, theme, and topic at the same time. It is argued that, unlike semantic and syntactic functions, pragmatic function assignment is determined by contextual factors (both linguistic and situational.) Context plays a vital role in shaping the information structure of the sentence in SA.

2. Arab Grammarians On Function and Structure

Historically, Arab grammarians considered the sentence as an array of functions, which were recognized to have established positions, known as mawdi', which were filled by suitable lexemes. This amounts to the recognition by the early Arab grammarians of paradigmatic classes as constituents that are substitutable within one of these established positions. Also recognized were the syntagmatic relationships of order and dependency. For example, in Arabic if the NP has both a determiner and a noun, the noun must be preceded by the determiner: 'al-maktab-u 'the office'. Likewise, in the Arabic NP, there is a head, which is typically a noun, and an optional adjective modifier which is dependent on the noun: 'al-maktab-u 'al-kabir-u 'the big office'.

2.1. Recognition of Syntactic Categories

Three syntactic categories were also recognized by the early Arab grammarians. One category is the noun 'ism', which included

nouns, pronouns, adjectives, and numerals. A second category is verbs fiʔl, which included both the verb and the verb phrase. The third category is the particle harf and included adverbs, undeclined articles, conjunctions, interjections, interrogatives, and prepositions.

One category may modify another category. Thus, verbs, articles, and adjectives may modify nouns, and adverbs modify verbs. Adverbs may be modified by other adverbs. Each category is associated with certain functions in the sentences. Since nouns have only a semantic function, they may function as subjects or predicates, while verbs may function as predicates but not subjects. Particles do not function as subject or predicate.

These categories are unified in a structure by the concept 'isnaad 'predication'. Predication of 'events' in SA is accomplished chiefly by the category of verb. 'States' in SA are predicated by the adjective, just as they may be in English. In English, however, a copulative verb links the predicate adjective to the subject. In contrast, the SA predicate adjective is not usually preceded by a copulative verb. (Samir-un Ø muṭṭahid-un 'Samir is hard-working').

2.2. Case Markers

According to the early Arab grammarians, case markers in SA served as signals (dalaa'il) for the many grammatical functions (maʔaanii 'meanings') to which nouns are put as a consequence of the influence of grammatical operators (?awaamil). The grammatical relationship between the nouns in a sentence was reflected in the case markers. Case, as such, was considered to be a syntactic category, while the functional relations of cases were handled within syntax. Importance was also given to the crucial role of case markers in indicating various semantic categories of verb-to-noun relations. The correlation between case markers as used in a sentence and the semantic consequences of the use of those case markers were described by early Arab grammarians, who further noted that case markers are used to indicate syntactic relations such as subject and predicate, as well as semantic relations such as agent and patient.

Considering case as a notional category, it was traditionally concerned with the syntactico-semantic relationship firstly between verbs and nouns, and secondly between nouns. Considering case as a formal category, it was used to refer to the formalized statement of this relationship. Considering case as a morphologically paradigmatic category, it was concerned with a regular array of such statements.

2.3. Constituent Order

Although the order of constituents in SA reflects considerable flexibility, the VSO word order is used more frequently, and as such is considered to be the unmarked order of constituents. Semantic roles and syntactic functions are

indicated in the sentence by means of case markers, in accordance with their functions in the sentence. Case markers in SA are usually manifested as suffixes attached to nouns, as can be seen in the following examples:

- (1)a. 'a?taa 'aliyy-un 'al-maa' -a li-'al-walad-i
gave Ali -nom. the-water-acc. to-the- boy -gen.
'Ali gave the water to the boy.' (VSO)
- b. 'aliyy-un 'ibn-un bar-un (SP)
Ali -nom. son-nom. good-nom.
'Ali is a good son.'
- c. 'aliyy-un 'a?taa 'al-walad-a maa' -an
Ali -nom gave the- boy -acc water-acc.
'It was Ali who gave the boy water.' (SVO)
- d. 'al-walad-a 'a?taa-hu 'aliyy-un maa' -an
the- boy -acc. gave-him Ali -nom water-acc.
'It was the boy that Ali gave water to.' (OVS)

The correlation of case markers with syntactic functions and semantic roles can be seen in the above examples. In (1)(a), (c), and (d) Ali-un has the semantic role of AGENT for the verb 'a?taa. In (1)(a), 'al-risalat-a is the PATIENT for the verb 'a?taa; in (1)(c) and (d) there are two PATIENTS, 'al-walad-a and maa'-an. In SA, agents are correlated with the syntactic function of SUBJECT, and patients with OBJECT (universal). Traditionally, a difference was made between the subject of nominal sentences (or equational sentences which have no verb, as in (1)(b)) and the subject of verbal sentences (agent), as in (1)(a). In both instances, the nominative case marker is used to indicate the syntactic and semantic subjects, while the accusative case marker is used to indicate objects of verbs, as in (1)(a), (c), and (d). Genitive case markers are used to indicate objects of prepositions as in (1)(a).

2.4. Verb as Nucleus

Historically, the verb was seen as the nucleus of the sentence, with the other constituents functioning as satellites. The traditional claim was that the verb was not movable, rather that the other elements in the sentence were moved around it in a process known as taqdiim wa ta'khiir 'preposing and postposing'. Both (1)(c) and (d) have preposed elements, the agent in the former, the patient in the later. Case markers assure the correct assignment of function for these inverted constituents. Thus, it can be seen that the syntactic and/or semantic functions of these constituents is not always indicated by the surface word order in SA. Because case markers are considered a morphologically integral part of the noun phrase, the case markers also moved when an NP was shifted from its unmarked position. Thus, case markers maintain the original syntactic and semantic relations

among the nouns of a sentence even when they have been shifted to a new order. In other languages, for example English, there is a drastic change of syntactic and semantic meaning when the word order is shifted: The cat chased the mouse and The mouse chased the cat.

2.5. Pragmatic Functions

Although there is a regular correlation of grammatical and semantic functions with case in SA, no such correlation exists for case and thematic functions, i.e., there is no particular grammatical realization for a particular pragmatic function.

- (2)a. maadaa hadaOa li-'aliyy-in
 what happened to- Ali -gen.
 'What happened to Ali?'
- b. 'aliyy-un safara 'ila 'al-qahira
 Ali -nom. traveled to Cairo
 'Ali traveled to Cairo.'
- c. 'aliyy-an shahada-hu 'al-muhandis-u
 Ali -acc. saw -him the-engineer-nom.
 'It was Ali that the engineer saw.'

In both (2)(b) and (c) Ali is the theme, given the context of (2)(a), although in (2)(b) 'aliyy-un is a nominative agent and in (2)(c) 'aliyy-an is an accusative object. This illustrates the point that in SA grammatical and semantic relations do not correlate directly with pragmatic categories.

3. The Systems of the Clause in Arabic

The early Arab grammarians, like modern systemic-functionalists, believe that function is a derivative concept based on the notion of position in structure and the occurrence of a category in the position, i.e., the occurrence of a constituent in a position specifies its function(s). The analyses of the clause proposed by the early Arab grammarians seem to correspond with Halliday's three well-known macro-functions of language, i.e., ideational, interpersonal, and textual. The early Arab grammarians implicitly recognized the three Hallidayan systems of transitivity, mood, and theme, although with varying degrees of development. A close investigation of these three systems reveals an intersecting effect on the structure of the clause. The relations among constituents in each system define the function(s) of each constituent in a clause. This means that each constituent can be thought of as being multi-functional since all the systems simultaneously inform the function of the constituent.

The transitivity system belongs to the ideational macro-function of language. The early Arab grammarians considered the

verb as the nuclear element of the sentence (cf 2.4). They made a distinction between two basic types of sentences, verbal and nominal (cf 2.3.). Verbal sentences begin with a verb, nominal sentences with an NP. The set of functions in a verbal sentence--such as agent, patient, and so on--is determined by the verb which presents the process in the clause, i.e., the structure reflects the propositional content of the sentence (who did what to whom). Analysis of the verbal sentence in the traditional grammars of Arabic was based basically on the criterion of transitivity.

The mood system belongs to the interpersonal macro-function of language. The relations that the early Arab grammarians recognized in this system dealt with the purpose of the structure in making a statement, asking a question, forming a request, or otherwise using a clause in embedded structures. The set of functions in a nominal sentence--such as subject and predicate--is determined by the relationship that the initial NP bears to other constituents in the sentence.

The theme system belongs to the textual macro-function of language. This system deals with the information structure of the sentence as used in given contexts. This system relates more to the mood system. The interdependency of these three systems will become clear in the following discussion.

4. Multi-Function Assignment in Arabic

The subject, the agent, the theme, and the topic of a sentence in SA can be identified because of the intersecting systems of transitivity, mood, and theme systems (Halliday 1967, 1985). The options available in these three systems together establish what the structure of the sentence will be. The transitivity system determines the semantic functions such as agent, patient, and goal. The mood system determines the grammatical relations of subject and predicate. The theme system determines pragmatic relations such as theme and rheme. The bi-systemic function 'topic', which cuts across the mood and theme systems, is introduced here as means of elucidating problematic syntactic structures that cannot be accounted for otherwise. In SA, one constituent may have a number of roles/functions at the same time; that is, all the systems may unite in one element of the sentence. The overlapping of these systems may allow one element to function as the subject, agent, theme, or topic simultaneously.

4.1. Historical Distinction of Subject and Agent

Historically, the Arab grammarians distinguished between the subject and the agent of the sentence by using three criteria: (1) what the sentence is about, (2) the initial element of the sentence about which something is predicated, and (3) the doer of the action.

- (3)a. kataba 'aliyy-un 'al- dars -a
 wrote Ali -nom. the-lesson-acc.
 'Ali wrote the lesson.'
- b. 'aliyy- un kataba 'al- dars -a
 Ali -nom wrote the-lesson-acc.
 'Ali wrote the lesson.'

The subject of a nominal sentence mubtada', as in (3)(a), was considered to be what the sentence was about and also as the initial element of the sentence. The agent faa'il, also in (3)(a), was seen as the doer of the action. The early Arab grammarians did not consider 'aliyy-un in (3)(b) to be the agent, instead claiming that a covert pronoun, which is part of the morphological inflection of the verb, is the agent. This separation of 'aliyy-un from the role of agent in (3)(b) seems illogical in view of the fact that it realizes all three of the criteria for subject and agent as given above.

4.2. Proposed Distinction for Subject and Agent

I believe that in trying to identify 'subject' and 'agent' as separate entities, the early Arab grammarians were endeavoring to make a distinction between three kinds of subjects. The constituent about which something is predicated is the grammatical subject in that it participates in the grammatical structure of the sentence and responds to grammatical rules such as number and person agreement with the verb. The doer of the action is the logical subject. What the language-user intends the sentence to be about is the psychological subject. In (3)(b) the conflation of grammatical, logical, and psychological subject is realized in 'aliyy-un. Consider the following example:

- (4) 'al- dars -a kataba-hu 'aliyy- un
 the-lesson-acc. wrote-it Ali -nom.
 'Ali wrote the lesson.'

Because it is the initial element in (4), 'al-dars-a was considered by the early Arab grammarians to be the subject mubtada', even though traditionally the mubtada' must be in the nominative case. What the Arab grammarians failed to take into consideration was that the object NP was preposed for the sake of emphasis. This is the same principle that allows for the preposing of the agent in (3)(b), making it the isolated natural subject 'INS' (topic) while at the same time keeping the same semantic relationship between the verb and its logical subject (doer).

The term 'agent', whose domain is the semantic level of the sentence, refers to the logical subject of the sentence or the doer. The term 'subject', which is a syntactic category and whose domain is the syntactic level of the sentence, refers to the grammatical subject of the sentence. The term 'theme', whose domain is the theme system and which is thus a pragmatic

category, is the psychological subject of the sentence, i. e., the point of departure for the sentence. The term 'topic', which operates within the syntactic and the pragmatic systems and is thus a syntactico-pragmatic category, refers to the initial element of the sentence which indicates what the sentence is about. While these items may be used individually, there is no question but that they overlap so that a constituent may have one or more of these functions simultaneously.

4.3. Differences between Theme and Topic

The basis for the difference between 'theme' and 'topic' in SA is that topic is a syntactico-pragmatic function while T is only a pragmatic function. The first difference is that information which is assumed to be shared knowledge as a result of the context or situation is expressed as the theme 'T' of the sentence. Given or new information may also be expressed in the topic, although when the information is new, it has a 'presentational' pragmatic function. Second, nominative case endings are always used for topics, although any case ending may be used for Ts according to its syntactic relationship in the sentence. Third, any grammatical category may be used for Ts, but only nouns are acceptable for the topic. Fourth, a pause, often seen in the orthography as a comma, separates the topic from the rest of the sentence. Such a pause does not separate the T from the R. Fifth, sentence-initial position is consistently occupied by the topic; whereas the T may be found sentence-initially unless the R has been fronted for emphasis. Sixth, the obligatoriness of topics and Ts varies, the topic obligatorily appearing in the surface structure of the sentence. Because of the influence of the context or situation, the T may be optionally deleted from the surface, but its presence is, however, assumed by both speaker and hearer. Seventh, there is a strict binary dichotomy between the topic and the comment (*muftada'/khabar*), but there may be intermediate transitions between the T and the R. A constituent may be considered more thematic or more rhematic, but only one constituent may be recognized as the topic. While these differences are sufficient to require treating topic and T as separate functions in SA, it must not be forgotten that any element may be both a topic and T simultaneously.

4.4. Similarities between Topic and Theme

Although topic and T exhibit several telling differences as mentioned above, there are also several features which they share. They both provide a point of departure which serves as the initial element of the sentence from which the speaker's communication proceeds. Secondly, the notion of 'what the sentence is about' can be correlated approximately with topicality and thematicity. Further, the stage for the entire discourse, which includes the spatial, temporal, and/or conceptual domains for the sentence, is set by both topic and T. Both topic and T have definite

referents. Lastly, except when a presentational function is used for a newly introduced topic, information that the speaker assumes the hearer shares may be expressed by both the topic and T.

4.5. Topic and Subject Equivalence in SA

The subject of a nominal sentence in SA, which is composed of a subject and a predicate, may be considered equivalent to the topic. The structure for a sentence with a topic is NP + S. The topic-comment structure in SA introduces a subject (INS) and follows it with an embedded predicate sentence. I assert that the typology for subject-predicate constructions must include the topic-comment construction as a special case, in which the subject has undergone topicalization. Topicalization in SA means that an NP constituent in the sentence has been selected as a topic of predication and is therefore given greater prominence. The mechanics of topicalization involve one of two methods: (1) separation of the topic from the rest of the sentence by a pause, if it is in sentence-initial position, and/or by enclosing it in the 'ammaa ... fa. 'as for' expression; or (2) movement of the topicalized element to the sentence-initial position. Both methods involve marking the topicalized constituent with the nominative case marker. Concurrently, a pronominal copy of the topicalized constituent, traditionally called a 'resumptive' pronoun, is left in the original position in the original position in the sentence as a link between the topic and the comment. Consider the examples below:

- (5)a. kataba 'aliyy-un 'al-risalat-a
wrote Ali - nom. the-letter-acc.
'Ali wrote the letter.'
- b. 'aliyy-un kataba 'al-risalat-a
Ali - nom. wrote the-letter -acc.
'Ali, he wrote the letter.'
- c. 'aliyy-un kataba huwa 'al-risalat-a
Ali - nom. wrote he the-letter -acc.
'Ali, he wrote the letter.'
- or 'Ali, it was he who wrote the letter.'
- d. 'al-risalat-u kataba-ha 'aliyy-un
the-letter-nom. wrote-it Ali - nom.
'The letter, Ali wrote it.'
- e. 'al-risalat-u 'aliyy-un kataba-ha
the-letter-nom. Ali-nom. wrote-it
'The letter, it was Ali who wrote it.'
- f. 'ammaa 'aliyy-un fa-kataba 'al-risalat-a
'As for Ali, he wrote the letter.'

- g. 'ammaa 'al-risalat-u fa-kataba-ha 'aliyy-un
'As for the letter, Ali wrote it.'

In (5)(b) and (c), the topic is the agent 'aliyy-un and is followed by a pause. In both sentences topicalization creates a subject NP which is external to the sentence comment that follows it. The verb in both sentences is inflected to agree with the covert subject in (5)(b) and the overt subject in (5)(c), which in turn are coreferential with the topics of these two sentences. Note that in (5)(c), emphasis on the agent of the comment clause is given by the addition of an independent pronoun which functions as the overt subject of the clause. The topic in (5)(d) and (e) is the patient. Referring back to the topic in both of these examples is the resumptive pronoun -ha. Under the adjacency principle, patients (objects) should be close to the verb; however, preposing the patient (object) for the purpose of topicalization, as in (5)(d) and (e), requires that the accusative case marking of the patient be changed to the nominative case marking. Semantic clues must be used in such cases to establish the semantic roles of the constituents. Still greater emphasis is given the topic when it is preceded by the disjunctive particle 'amma 'as for' and followed by the classificatory particle fa-, as is seen in (5)(f) and (g). I consider that the use of this structure has the effect of increasing the 'topicality' of the topic.

5. Conclusion

The comparisons in this study between the Hallidayan systemic-functional theory and the Arabic grammatical tradition serve the following purposes. They will help to achieve a better understanding of the Arabic tradition. They will also enrich systemic-functional theory without affecting the methodology, principles, or the organization of the theory.

The data and analysis given above lead to a number of conclusions about the syntactic structure(s) of the clause in Arabic. SA does not always utilize surface order of constituents as a means of indicating function. Instead, it uses morphological case markers to indicate syntactic and semantic functions. Pragmatic functions, on the other hand, are assigned case markers in accordance with syntactic and semantic functions. Constituents in SA can be displaced from their unmarked position, but retain the same function, as can be seen by their carrying the same case markers.

It was shown that the functions of constituents in Arabic are specified according to the relations exhibited in three systems: transitivity, mood, and theme. These three systems jointly determine the occurrence and co-occurrence of the three types of functions, i.e., semantic, syntactic, and pragmatic. The transitivity and mood systems operate in a straightforward manner, mapping semantic roles onto syntactic functions. The theme system operates across the boundaries of the transitivity and mood systems, and as such bears no direct one-to-one correlation with

any of the syntactic or semantic functions. The notions of T and R are more useful in analyzing both verbal and nominal sentences in SA. Also useful to the analysis is the pragmatic function of 'focus', which will be studied in a further paper.

REFERENCES

- Berry, M. 1975. Introduction to Systemic Linguistics: 1, Structures and systems. London: Batsford.
- Berry, M. 1977. Introduction to Systemic Linguistics: 2, Levels and Links. London: Batsford.
- Berry, M. 1981. 'Systemic linguistics and discourse analysis: a multi-layered approach to exchange structure' in Coulthard & Montgomery (1981), 120-145.
- Butler, Christopher S. 1985. Systemic Linguistics: Theory and Applications. London: Batsford Academic and Educational.
- Carter, M. G. (ed). 1981. Arab Linguistics: An Introductory Classical Text with Translation and Notes. Amsterdam: John Benjamins.
- Coulthard, M. and M. Montgomery. 1981. Studies in Discourse Analysis. Routledge and Kegan Paul.
- Fawcett, R. P. 1975. 'Some proposals for systemic syntax, Parts 2 & 3', MALS Journal, 2(1) & 2(2):43-68 & 35-68.
- Fawcett, R. P., M. A. K. Halliday, S. M. Lamb, and A. Makkai (eds). 1984. The Semiotics of Culture and Language, Vol. 1; Language as Social Semiotic. Frances Pinter.
- Grimes, Joseph E. 1967. 'Positional analysis.' Language 43:437-444.
- Halliday, M. A. K. 1967/68. 'Notes on transitivity and theme in English' Parts 1, 2, & 3. Journal of Linguistics 3.1, 3.2 & 4.2:37-81, 199-244 & 179-215.
- Halliday, M. A. K. 1969. 'Options and Functions in the English Clause,' BRNO Studies in English 8:81-88.
- Halliday, M. A. K. 1970. 'Functional diversity in language, as seen from a consideration of modality and mood in English.' Foundations of Language 6, 322-61.
- Halliday, M. A. K. 1980. 'Functions of language,' Sophia Linguistica, 6:31-42.

- Halliday, M. A. K. 1985. *An Introduction to Functional Grammar*. London: Edward Arnold Ltd.
- Halliday, M. A. K. and Ruqaiya Hasan. 1976. *Cohesion in English*. London: Longman (English Language Series 9).
- Halliday, M. A. K. and J. Martin. 1981 (eds). *Readings in Systemic Linguistics*. London: Batsford.
- Heath, Jeffrey. 1978. 'functional universals,' BLS4:86-95.
- Hooper, P., and S. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56:251-99.
- Hudson, R. A. 1967. 'Constituency in a systemic description of the English clause,' *Lingua* 18:225-50.
- Hudson, R. A. 1971. *English Complex Sentences: An Introduction to Systemic Grammar*. Amsterdam: North Holland.
- Hudson, R. A. 1974. 'Systemic generative grammar,' *Linguistics* 139:5-42.
- Lamb, Sydney M. and M. A. K. Halliday. 1973. 'The Halliday/Lamb linguistic theory,' *English in Australia* 24:3-17.
- Monaghan, James. 1979. *The Neo-Firthian Tradition and its Contribution to General Linguistics*. Tübingen: Max Niemeyer Verlag.
- Nilsen, Don Lee Fred. 1972. *Toward a Semantic Specification of Deep Case*. The Hague: Mouton.
- Sibawayh. 1881. 'Al-Kitaab 'The book', ed. by H. Derenbourg, 2 vols. Hildesheim. Georg Olms Verlag.
- Steiner, Erich. 1985. 'Working with transitivity: system networks in semantic-grammatical descriptions,' *Systemic Perspectives on Discourse* 1:163-188.
- Sullivan, William J., III. 1980. 'Syntax and linguistic semantics in stratificational theory,' *Syntax and Semantics*, Vol. 13: Current Approaches to Syntax, ed by Edith A. Moravcsik and Jessica R. Wirth, 301-327. New York: Academic Press.

The Noun Phrase Conjunction -wa in Korean

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The Korean suffixing marker -kwa/-wa, which functions to conjoin noun phrases, poses some interesting problems, both in regard to its syntactic patterning and its semantics. Greenberg has proposed that SVO type languages like English, which place objects after verbs, tend to put conjunctions *before* the second of the two constituents they connect, and SOV type languages like Korean, which place objects before verbs, tend to put conjunctions *after* the second of the two words they connect. Thus, according to Greenberg, NP and NP is the expected pattern of English and NP NP wa is the expected pattern for Korean. However, in Korean we have both pattern-1 NP wa NP and pattern-2 NP NP wa.

This study attempts to provide a semantic description of -wa based on a functional view of grammar, identifying the semantic differences and the similarities of -wa in its basic patterns. We will refer to -wa in pattern 1 as p1-wa and in pattern 2 as p2-wa. It will thus be apparent that there is *only one conjunctive -wa* in Korean. But the semantics of -wa in pattern 1 differs from that of -wa in pattern 2 in that p1-wa signals a unit composed of equal partners, while p2-wa signals that the composing partners are unequal. The equality (or inequality) of the partners is recognized by the varying force with which they participate in the event.

1.1. The semantic similarity between p1-wa and p2-wa

A sentence with p2-wa as in (1) and a sentence with p1-wa as in (2) have some semantic similarity.

- | | | | |
|-----|------------------------|----------|-------------------------------|
| (1) | Kim-i | Lee-wa | ssau-n-ta |
| | Kim-sm | Lee-with | fight-present-indicative mood |
| | 'Kim fights with Lee.' | | |
| (2) | Kim-kwa | Lee-ka | ssau-n-ta |
| | Kim-and | Lee-sm | fight-pre-ind |
| | 'Kim and Lee fight.' | | |

Within the transformational generative framework, sentence (2) is taken as the basic sentence, and sentence (1) is derived from (2) by transformations. Lakoff and Peters (1969:119) say 'John killed a man with Bill' is derived from the underlying sentence 'John and Bill killed a man'. There is a lengthy discussion arguing that the English sentence (2) represents the underlying structure and not sentence (1). In other words, Lakoff and Peters argue that it is not possible to derive phrasally conjoined noun phrases like (2) from underlying with-phrases like (1) because there are no underlying with-phrases. An important point of Lakoff and Peters which is

relevant to the present study is that there is no meaning difference between sentences (1) and (2) after transformation. In other words, there is no meaning change between the surface structure (1) and the deep structure (2). The same claim is made for the English equivalents of the Korean sentences in (3) and (4), (5) and (6), (7) and (8).

- | | | | | |
|-----|-------------------------------|----------|-----------------|-------------|
| (3) | Kim-i | Lee-wa | manna-ss-ta | |
| | Kim-sm | Lee-with | meet-past-ind | |
| | 'Kim met with Lee.' | | | |
| | | | | |
| (4) | Kim-kwa | Lee-ka | manna-ss-ta | |
| | Kim-and | Lee-sm | meet-past-ind | |
| | 'Kim and Lee met.' | | | |
| | | | | |
| (5) | Kim-i | Lee-wa | Seoul-e | ka-ss-ta |
| | Kim-sm | Lee-with | Seoul-loc | go-past-ind |
| | 'Kim went to Seoul with Lee.' | | | |
| | | | | |
| (6) | Kim-kwa | Lee-ka | Seoul-e | ka-ss-ta |
| | Kim-and | Lee-sm | Seoul-loc | go-past-ind |
| | 'Kim and Lee went to Seoul.' | | | |
| | | | | |
| (7) | Kim-i | Lee-wa | kyulhonhe-ss-ta | |
| | Kim-sm | Lee-with | marry-past-ind | |
| | 'Kim got married to Lee.' | | | |
| | | | | |
| (8) | Kim-kwa | Lee-ka | kyulhonhe-ss-ta | |
| | Kim-and | Lee-sm | marry-past-ind | |
| | 'Kim and Lee married.' | | | |

As indicated by the English glosses of the above sentences, the pairs (3) and (4), (5) and (6), and (7) and (8) share an analogous semantic contrast signalled by NP NP wa and NP wa NP, respectively. The interesting feature of the patterns is that, -wa appears in both, but in different positions. I believe that the same morphological form in p1-wa and p2-wa suggests that they share some semantic similarity; however, their different position indicates that they have some semantic differences, too. Consider the following multiple NP sentences.

- | | | | | | |
|-----|---|---------|-----------|----------|---------------|
| (9) | Kim-i | Lee-wa | Susan-eke | ton-ul | ju-ess-ta |
| | Kim-sm | Lee-and | Susan-dat | money-om | give-past-ind |
| | (a) 'Kim gave money to Lee and Susan.' | | | | |
| | (b) 'Kim with Lee gave money to Susan.' | | | | |

In (9), there can be two separate acts in which money is given to Lee and then to Susan, or there can be one act in which money is given simultaneously to Lee and Susan. If there is a pause after -wa or stress on Lee, (b) is a more plausible interpretation than (a). Of course the sense of (a) or (b) can be derived from the context even though there is no special pause or accent; for example, in the previous context if Susan asked money from Kim and Lee, then the (b) interpretation is more appropriate. Thus -wa of Lee-wa can be interpreted as either pattern p1-wa or p2-wa. Consider the following example:

- (10) U.S.-ka China-wa U.S.S.R-eke Philippines-ul
 U.S.-sm China-and/with U.S.S.R-IO Philippines-om
 yangbohe-ss-ta
 concede-past-ind

- (a) 'The US conceded the Philippines to *China and the U.S.S.R.*'
 (b) '*The US with China* conceded the Philippines to the U.S.S.R.'

In (10) also both p1-wa and p2-wa interpretations are possible as in (9) since -wa of China-wa can be interpreted in both ways. There is a case of multiple NPs and multiple occurrences of -wa in a sentence. For example:

- (11) a. na-nun sakwa-wa pam-kwa poto-wa pe-rul
 I-tp apple-and chestnut-and grape-and pear-om
 meok-ess-ta
 eat-past-ind
 'I ate an apple, a chestnut, a grape, and a pear.'
- b. *na-nun sakwa-rul pam-ul poto-rul pe-wa
 I-tp apple-om chestnut-om grape-om pear-with
 meok-ess-ta
 eat-past-ind
 *'I ate an apple, a chestnut, a grape, with a pear.'
- c. na-nun sakwa-rul pam-ul poto-rul pe-wa
 I-tp apple-om chestnut-om grape-om pear-with
 ttalki-wa, banana-wa meok-ess-ta
 strawberry-with, banana-with eat-past-ind
 'I ate an apple with a pear, a chestnut with a strawberry, a grape with a banana.'
- d. na-nun sakwa-rul pam-kwa poto-wa pe-wa
 I-tp apple-om chestnut-with grape-with pear-with
 meok-ess-ta
 eat-past-ind
 'I ate an apple with a chestnut, a grape, and a pear.'

(11a) is an acceptable sentence, where p1-wa links the multiple NPs, but (11b) which has more than one -rul is not acceptable. However, the (11c) version is acceptable. In (11c), each NP-rul is followed by an NP-wa. In (11d), the first and the second -wa is either p1-wa or p2-wa and it is difficult to decide. If the first and the second -wa are p1-wa, then the meaning is 'I ate an apple with three other fruits at the same time'; however, if the first and the second -wa are p2-wa, then the connection of three different actions is signalled 'I ate an apple with a chestnut' and 'I ate an apple with a grape' and 'I ate an apple with a pear'. These three actions do not necessarily occur at the same time. However, even in this case, the first and the second -wa have not only the meaning 'with,' but also the meaning 'and' because without that, the three sentences 'I ate an apple with a chestnut,' 'I ate an apple with a grape,' and 'I ate an apple with a pear' cannot be connected. However, if -wa is used with a p2-wa meaning, it only connects two NPs like 'apple with chestnut,' 'apple with grape,' and 'apple with pear.' Consider another example:

- (12) Kim-kwa Lee-wa John-kwa ka-ss-ta
 Kim-and Lee-and John-and go-past-ind
 (a) '(I/He/ She) went with Kim, Lee, and John.'
 (b) *'Kim, Lee, and John went.'

Sentence (12) in (a) gloss, the first and the second -wa are difficult to classify clearly as either p1-wa or p2-wa without the discourse context. It is either 'with Kim and Lee and John' or 'with Kim, with Lee, and with John.'

Sentences (12) and (11d) where the distinction between p1-wa and p2-wa is blurred, seem to support the hypothesis that there is only one -wa. Another thing to notice here is that p1-wa can construct multiple NP connections or multiple semantic units; but p2-wa cannot. In (11d), multiple NPs 'chestnut, grape and a pear,' are treated either as three NPs in one semantic unit '3 fruits as one group' in the case of p1-wa or three different groups by two NPs each as 'apple with chestnut,' 'apple with grape,' and 'apple with pear' in case of p2-wa. This is represented as in the following diagram:

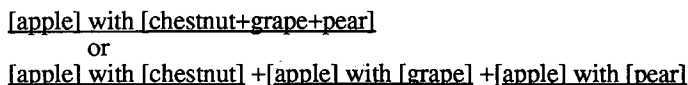


Figure-1

So far we have seen that p1-wa and p2-wa have some similarities and also have some differences. Now let us consider their semantic qualities comparing them with the object marker -rul.

1.2. -rul, p1-wa, and p2-wa

1.2.1. Accusative/dative markers and p2-wa

Sometimes p2-wa and the accusative marker -rul (the phonetic shape -ul occurs following a consonant) appear as alternate forms in an otherwise identical construction in Korean. However, there is a slight difference in meaning between the following two sentences.

- (13) a. Kim-i Lee-wa manna-ss-ta
 Kim-sm Lee-with meet-past-ind
 'Kim met with Lee.'
 b. Kim-i Lee-rul manna-ss-ta
 Kim-sm Lee-om meet-past-ind
 'Kim met Lee.'

In (13a), Lee knew at least that he was going to meet with Kim, but in (13b), Lee does not know and probably met Kim accidentally, but Kim met Lee on purpose. If it is a question of only Kim's intention to meet Lee, and Kim went to Lee's place and met Lee, then (13b) is more appropriate. When Lee is waiting for Kim, (13a) is more appropriate. If it is a special case like a doctor's appointment, the doctor already knows about the appointment; thus there would appear to be no distinction between -rul and p2-wa, but this does not hold. Consider the following examples:

- (14) a. Kim-i doctor-wa manna-ss-ta
 Kim-sm doctor-with meet-past-ind
 'Kim met with the doctor.'
- b. Kim-i doctor-rul manna-ss-ta
 Kim-sm doctor-om meet-past-ind
 'Kim met the doctor.'

In (14), the doctor knows that Kim is coming to meet him both in (a) and (b), but (14a) has the sense that there is more involvement by the doctor in the event of meeting than (14b). In (14b), it is more likely Kim's intent to meet with the doctor in order to ask solely about his sickness; in other words, it is more likely a strictly business appointment. However, in (14a), it is possibly also a business meeting, perhaps the doctor is an acquaintance of Kim and they will discuss matters other than Kim's illness. Again, if the intention of the meeting is only Kim's, (14b) is more appropriate than (14a). Consider these examples:

- (15) a. nampyun-i puin-ul talma-ss-ta
 husband-sm wife-om resemble-past-ind
 'The husband resembled his wife.'
- b. puin-i nampyun-ul talma-ss-ta
 wife-sm husband-om resemble-past-ind
 'The wife resembled her husband.'
- c. nampyun-i puin-kwa talma-ss-ta
 husband-sm wife-with resemble-past-ind
 'The husband resembled his wife.'
- d. puin-i nampyun-kwa talma-ss-ta
 wife-sm husband-with resemble-past-ind
 'The wife resembled her husband.'

The husband and wife are not genetic relatives. (15) can be used when 'resemble' is taken to mean 'similar to in appearance' or 'similar in behavior.' If the husband, and wife's appearances happen to be similar, (15a) and (15b) are both acceptable without much meaning difference. However, if they are similar in behavior, in (15a), the husband tries to become similar to his wife in behavior, but in (15b) it is the wife who is trying to be similar to her husband. In (15c) and (15d), if 'resemble' is used in the sense of 'similar in appearance', then there is also not much difference in meaning in (15c) and (15d). But if 'similar in behavior' is intended, then in (15c), the husband tries to be similar in behavior to his wife as in (15a), but unlike (15a), the wife also participates in the action of resembling. And in (15d), the role of husband and wife is reversed.

In (13a) Kim and Lee both move to the point at which they meet, but in (13b) Kim moves in Lee's direction. It is clearer in the following example:

- (16) a. Kim-i Lee-wa saranghe
 Kim-sm Lee-with love
 'Kim is in love with Lee.'

- | | | |
|------------------|---------|----------|
| b. Kim-i | Lee-rul | saranghe |
| Kim-sm | Lee-om | love |
| 'Kim loves Lee.' | | |

Sentence (16a) is the answer to question (17a) and (16b) is the answer to (17b);

- | | | | |
|-----------------------------|------------|-----------|--------------------|
| (17)a. Kim-i | nuku-wa | sarang-ul | ha-ni? |
| Kim-sm | whom -with | love-om | do-question marker |
| 'With whom is Kim in love?' | | | |
-
- | | | |
|----------------------|------------|----------------------|
| b. Kim-i | nuku-rul | saranga-ni? |
| Kim-sm | whom -with | love-question marker |
| 'Who does Kim love?' | | |

Sentence (16a) is interpreted as 'Kim loves Lee, and Lee loves Kim too (but probably less than Kim loves Lee).' However, in (16b) Kim loves Lee, but we do not know whether Lee loves Kim or not.

Thus, although there is similarity in meaning between p2-wa and the accusative marker -rul, a closer examination shows that there is a meaning difference between them. The differences in meaning are perhaps not always significant enough to be recognized clearly. P2-wa signals that the second participant is involved in the action more than when the object marker -rul is used. When there is an object marker as in (16b), the second participant Lee is more passively involved in the event of 'loving' than in (16a). This is clear when the event requires both participants' mandatory participation. Sentence (18a) shows that using -rul is not acceptable under this condition:

- | | | |
|------------------------|---------|---------------|
| (18)a. *Kim-i | Lee-rul | ssau-n-ta |
| Kim-sm | Lee-om | fight-pre-ind |
| * 'Kim and Lee fight.' | | |
-
- | | | |
|------------------------|----------|---------------|
| b. Kim-i | Lee-wa | ssau-n-ta |
| Kim-sm | Lee-with | fight-pre-ind |
| 'Kim fights with Lee.' | | |

Thus sentence (18a) is unacceptable because ssauta 'fight' requires both participants' contribution, but -rul marked Lee gives the impression that he is not reciprocally participating in the action. If Lee is not a contributing combatant, there can be no fight, and this contradicts the predicate ssauta 'fight.' However, (18b) is acceptable, since p2-wa attached to Lee gives the impression that he is participating in the event. On the contrary, if the semantics of the event precludes the second participant's active contribution, then p2-wa is not possible, and it is -rul which is acceptable:

- | | | | |
|----------------------|---------|-------|---------|
| (19) a. Kim-i | Lee-rul | honja | terinta |
| Kim-sm | Lee-om | alone | hit |
| 'Kim hit Lee alone.' | | | |

- b. Kim-i Lee-wa John-ul honja tterinta
 Kim-sm Lee-with John-om alone hit
 (a)*'Kim hit John alone with Lee.'
 (b) 'Kim hit Lee and John alone.'

In (19b), the (a) gloss is not possible, since the adverb honja 'alone' contradicts the second participant Lee's participation with Kim in the hitting, which is signaled by p2-wa. (I will not discuss the (b) gloss of (19b) since it is irrelevant to the present discussion, but the (b) gloss is a possible gloss since no contradiction occurs where Kim acts alone to hit 'Lee and John.')

Thus I can conclude that p2-wa and the accusative marker -rul are used somewhat interchangeably only in case the second participant can be ambiguously taken as an active contributor to the action and as a participant passively involved in the action. And even though p2-wa and -rul appear to be used interchangeably, there is a meaning difference. That is, p2-wa has more involvement in the event than the object marker -rul. There is a degree of participation between p2-wa and -rul lies in the degree scale of participation by the second named participant. This same difference recurs in the alternation of the dative case marker and p2-wa.

1.2.2. p1-wa and p2-wa

Now we compare p1-wa and p2-wa. In the following sentences (20) and (21), to accomplish the event 'meeting,' more than one participant, in this case 'Kim' and 'Lee,' are involved.

- (20) Kim-i Lee-wa manna-ss-ta
 Kim-sm Lee-with meet-past-ind
 'Kim met with Lee.'
- (21) Kim-kwa Lee-ka manna-ss-ta
 Kim-and Lee-sm meet-past-ind
 a. 'Kim and Lee met.'
 (b. 'Kim and Lee met with somebody.')

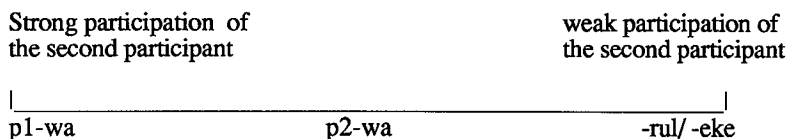
Sentence (20) has only one meaning, that 'Kim met with Lee,' but sentence (21) has two possible meanings, that either 'Kim and Lee met' or 'Kim and Lee (together) met with somebody (else).' From the perspective of the participants' involvement in the action, 'Lee' in sentence (20) participates in the action of meeting in a less active way than does 'Kim.' 'Kim' in sentence (20) shows more initiative in the action of meeting than does 'Lee.' 'Lee' gives the impression that he just accompanies the action of meeting 'Kim.' On the contrary, in sentence (21), 'Kim' and 'Lee' have equal intention of meeting each other. In other words, the two participants of (21) have a more symmetrical relation than in (20). In (21), Kim and Lee both fully agree with meeting each other or both agree with each other to meet with somebody else. If the president of US and Russia had a meeting, then US newspapers would write probably, 'President Bush met with the Russian president Yeltsin.' or at least 'President Bush and President Yeltsin met,' but rarely write 'President Yeltsin met with president Bush.' However, in Russia, the newspapers would probably write 'President Yeltsin met with president Bush.' or 'President Yeltsin and President Bush met.' However, in a third country like China the paper would tend to write 'President Yeltsin and President Bush met' or 'President Bush and President Yeltsin met,' but they would try to avoid writing

'President Yeltsin met with president Bush.' or 'President Bush met with President Yeltsin' if the Chinese papers do not want to give impression that the country is taking sides.

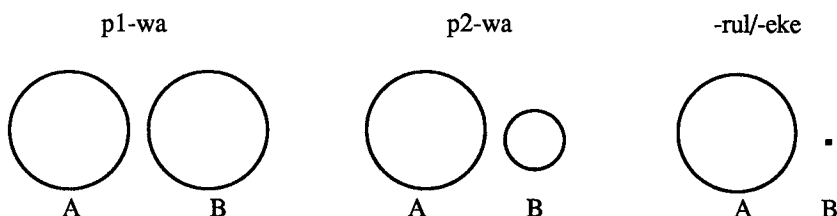
If we compare this finding, that p1-wa has more participation force than p2-wa, with (13) above repeated here as (22),

- (22) a. Kim-i Lee-wa manna-ss-ta
 Kim-sm Lee-with meet-past-ind
 'Kim met with Lee.'
- b. Kim-i Lee-rul manna-ss-ta
 Kim-sm Lee-om meet-past-ind
 'Kim met Lee.'

p2-wa in (22a) shows more intention on the part of 'Lee' than does the object marker -rul as we have seen in section 1.2.1. Thus, there is a gradation in the degree of involvement of the second participant which is signalled by the speaker's choice of p1-wa, p2-wa, and -rul. The scale can be represented as in the following diagram:



The second participant's degree of participation can be pictorially represented as follows:



Since p1-wa signals the more equal distribution of participation by the two subjects, the meaning of the utterance is not so very different if the first and second participants are exchanged:

- (23) Lee-wa Kim-i manna-ss-ta
 Lee-and Kim-sm meet-past-ind
 (a) 'Lee and Kim met.'
 (b) 'Lee and Kim met with somebody.'

Sentences (4) and (23) indicate little difference of participating force by the agents in the action of 'meeting' of the two participants. However, if we change the order

of participants in sentence (3), as in (24), then the main participating force moves to 'Lee' and 'Kim' has less participating force than in (3):

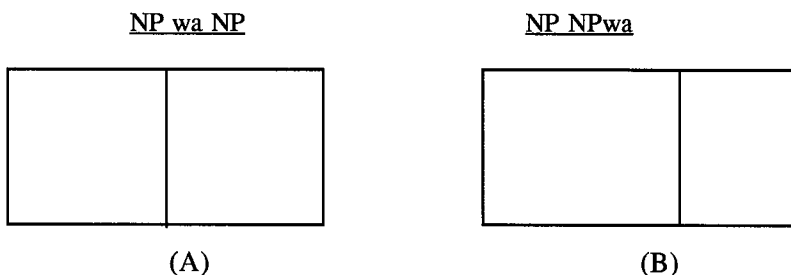
- (24) Lee-ka Kim-kwa manna-ss-ta
 Lee-sm Kim-with meet-past-ind
 'Lee met with Kim.'

In other words, 'Kim' and 'Lee' exchange their participating power from strong to weak and from weak to strong. Consider also the following example:

- (25)a. Mary-wa John-i kyulhon-hakosip-ta
 Mary-and John-sm marry-want to-ind
 (a) 'Mary and John want to marry.'
 (b) 'Mary wants to marry (somebody) and John wants to marry (somebody).'
- b. Mary-ka John-kwa kyulhon-hakosip-ta
 Mary-sm John-with marry-want to-ind
 'Mary wants to marry John.'

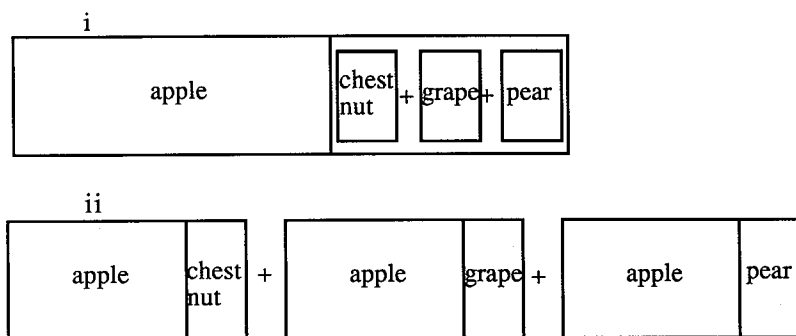
This hakosipta 'want to' shows more clearly the difference between p1-wa and p2-wa. In case of p1-wa as in (25a), the intention of marrying is equally distributed between participants, Mary and John, but in (25b), the intention of marrying is entirely Mary's.

The equal participation of p1-wa means it characterizes a *symmetrical* semantic unit, and the weak participation of p2-wa means it makes an *asymmetrical* semantic unit. NP wa NP signals one semantic unit specifying the second participant as an *equal* semantic partner with the first participant. NP NP wa, on the other hand, indicates *unequal* semantic coordination. This contrast can be represented diagrammatically as follows:



Another interesting point is that in sentences containing more than two conjoined NPs, each NP in an NP wa NP construction can behave independently when they are conjoined in multiple NP sentences as in (i) of the following diagram, which represents the above sentence (11d) figure-1 diagram in section 1.1 pictorially. The plus sign '+' indicates the linkage of single NPs in a coordinate fashion like 'chestnut' or 'grape' or 'pear.' In (A), a pair of NPs need not act together as one block as is the case in (B), where they *do* form an irreducible block; hence sentence (25a) has the second (b) gloss. Each of the symmetrical and equal partners of NP wa NP may act independently of the other. In contrast to this, the unequal and

asymmetrical relation of NP NP wa of (25b) translates into a dependence of the second NP upon the first; hence there is but one gloss here. Cf. below. NPs in an NP NP wa construction can not behave independently but behave together as one block conjoining with additional NPs. The (B) form above conjoins a form of the same (B) type as in (ii) of the following diagram. The plus sign '+' occurs between NP blocks, each of which is a single semantic unit containing two NPs like 'apple with chestnut' or 'apple with grape' or 'apple with pear.'



This feature is related to another characteristic of p1-wa and p2-wa. Consider the following examples:

- (26)a. Kim-i Lee-wa kyulhonhe-ss-ta
 Kim-sm Lee-with marry-past-ind
 (a) 'Kim got married with Lee.'
 (b) *'Kim and Lee each got married with somebody.'

In (26a), the only possible interpretation is the (a) gloss and the (b) gloss is not possible. However, (26 b) can have two possible interpretations, i. e.

- b. Kim-kwa Lee-ka kyulhonhe-ss-ta
 Kim-and Lee-sm marry-past-ind
 (a) 'Kim and Lee got married.'
 (b) 'Kim and Lee each got married with somebody.'

In sentence (26a), Kim married with Lee, but not Mary or Susan, etc. There is a strong implication that Kim willingly chose Lee, not Mary or Susan as his bride. In sentence (26b), the marriage is by Kim and Lee's mutual agreement and not by one party's selection. The reason that sentence (26a) has only one interpretation and sentence (26b) has two can be explained. The only formal difference between the two sentences which have a reciprocal verb kyulhonhata 'marry' is p1-wa in (26b) and p2-wa (26a). In sentence (26a), the need of plural participants for the verb kyulhonhata 'marry' is satisfied by the p2-wa attached to NP Lee-wa. P2-wa makes the second NP Lee-wa act together with the first NP Kim-i; they married each other, and there is no possibility of the two NPs acting independently. However, in (26b), the possibility of the acting independently in the gloss (b) is higher than in (26a) although the (a) interpretation still has a higher possibility than

the (b) interpretation. In other words, p1-wa sentences have two possible contextualized interpretations, but p2-wa sentences have only one possible interpretation. Thus p1-wa leaves more room to interpret the sentence in two different ways than does p1-wa. Consider (5) and (6), replicated from above:

- (5) Kim-i Lee-wa Seoul-e ka-ss-ta
 Kim-sm Lee-with Seoul-loc go-past-ind
 'Kim went to Seoul with Lee.'
- (6) Kim-kwa Lee-ka Seoul-e ka-ss-ta
 Kim-and Lee-sm Seoul-loc go-past-ind
 a. 'Kim went to Seoul and Lee went to Seoul.'
 b. 'Kim and Lee together went to Seoul.'

In (5) and (6), both Kim and Lee are agent participants. However, as has been noted by others (Akiba 1971, Lakoff and Peters 1969, etc.) sentence (6) is ambiguous in the absence of context, as to whether it involves two separate events (Kim's going to Seoul and Lee's going to Seoul) or a single event (Kim and Lee's going to Seoul together). Notice that compared to sentence (25b) which has a reciprocal verb, the possibility of acting independently between two participants is higher here in sentence (6). To the native speaker, both interpretations are equally possible. The semantic interpretation proposed here for p1-wa and p2-wa explains why.

The reason lies, I believe, in the difference between p1-wa and p2-wa. It is related to the situations in sentence (11d): p2-wa makes the second NP work together more than p1-wa does. P2-wa makes two NPs into an asymmetric semantic unit; the participation force of the second participant is smaller and more passive in case of p2-wa, and the second participant depends more on the first participant since it can not stand alone. The accompaniment or comitative meaning is stronger in p2-wa. However, p1-wa allows two participants to have equal power of participation; thus they can act together. They are easier to separate since the two participants are not dependent on each other as in the case of (11d). Since they are easier to separate, the two participants more easily act independently. Thus p2-wa is used to make two participants act together. In cases such as sentence (5), p2-wa helps to interpret the sentence as having the meaning of reciprocal because it has only one interpretation, in contrast to (6). In the case of p1-wa, the conjoined participants have the possibility of working together and working independently, but if they work together, they participate in equal force. In the case of p2-wa, the two participants work together, but not in equal participation.

1.3. Conclusion

This paper has examined the semantic characteristics of the Korean conjunctive -wa in its two basic patterns (p1-wa and p2-wa).

First, in terms of the degree of participation force. P1-wa signals that two participants participate equally in the event, i. e. p1-wa creates a *symmetrical* semantic unity. However, p2-wa indicates that the second participant participates in the action in a less active way than p1-wa. P2-wa thus creates an *asymmetrical* semantic unity.

The second difference is that since p1-wa makes a symmetrical semantic unity, the

two parts of the semantic unit can be easily separated. But since p2-wa creates an asymmetrical unity the two participants act together, and the two parts of the semantic unit can not be isolated or fractured.

P1-wa and p2-wa thus share the function of linking NPs, but they mark a different degree of participation force in the event for the NPs they conjoin. P1-wa and p2-wa involve the *same morpheme* -wa, but they are semantically divergent. These semantic differences are reflected in the *differences in the patterning* of -wa.

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References

- Akiba, Katsue. 1971. Conjunction 'To' and Post position 'To' in Japanese. *Chicago Linguistic Society*. 1- 14.
- Givon, T. 1980. The Binding Hierarchy and the Typology of Complements. *Studies in Language*. 4:333-377.
- Gleitman, Lila R. 1969. Coordinating Conjunctions in English. in *Modern Studies in English: Readings in Transformational Grammar*, ed. by D. A. Reibel and Sanford. A. Schane. Englewood Cliffs, New Jersey: Prentice-Hall Inc. 80-112.
- Greenberg, Joseph H. 1978. *Universals of Human Language: vol 4, Syntax*. Stanford: Stanford University Press.
- Hinds, John. 1983. Topic Continuity in Japanese. *Typological Studies in Language: Topic Continuity in Discourse*. 3, ed. by T. Givon. Philadelphia: John Benjamins Publishing Company. 1-43.
- Hong, Jae-Sung. 1986. Symmetrical Sentence Studies in Modern Korean. *Tongbanghakji*. 253-288.
- Hong, Sa-Man. 1990. *The Special Suffixes of Korean: The Meaning Analysis*. Seoul: Hakmoon Press.
- Hopper, Paul J. and Thompson, Sandra A. 1991. Language Universals, Discourse Pragmatics, and semantics. Paper presented at the Rice University Symposium.
- Kendall, Sue Ann and Yoon, James Hye-Suk. 1986. Sentence Particles as Evidence for Morphosyntactic Interaction with Pragmatics. *Studies in the Linguistic Sciences*. 16:53-77.

Kim, Wan-Jin. 1970. Phrase Conjunction Wa and the Sentence Conjunction Wa. *Language Research*. 6:1-10.

Kim, Yeong-Hee. 1984. Wa Study. *Kukeokukmunhak*. (Korean Language and Literature) 65:53-81.

Lakoff, George and Stanley Peters. 1969. Phrasal Conjunction and Symmetric Predicates. in *Modern Studies in English: Readings in Transformational Grammar*, ed. by D. A. Reibel and Sanford. A. Schane. Englewood Cliffs, New Jersey: Prentice-Hall Inc. 113-142.

Lakoff, Robin. 1971. If's, And's, and But's about Conjunction. *Studies in Linguistic Semantics*, ed. by Charles J. Fillmore and Terence Langendoen. Holt, Rinehart and Winston, Inc. 115-150.

Martin, Jim R. 1983. Conjunction: The Logic of English Text. *Micro and Macro Connexity of Texts*, ed. by Janos S. Petofi and Emel Sozer. Hamburg: Helmut Buske Verlag. 1-72.

Yang, Insun. ms. *Semantic Conjunction in Korean Discourse*. Ph.D dissertation. Rice University.

Yu, Mok-Sang. 1984. *The Study of the Conjunction markers by their use*. Ph.D. Dissertation. Tankuk University, Seoul.

CE QUE C'EST QUE CETTE CONSTRUCTION !
ABOUT A NON-VERBAL QUE IN MODERN FRENCH¹

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1. Introduction

This paper deals with the modern French use of QUE which attaches to a right-hand dislocated NP in the structure C'EST + Attributive Complement + QUE + Noun Phrase².

1. a. (C'est) une belle fleur QUE la rose
! (Roses are such nice flowers !)(Grévisse
1975 : 505)

b. (C'est) horrible QUE de haïr !
(Hatred is such an horrible thing !)(Grévisse
1975 : 506)

c. Ce que c'est QUE la vie, tout de
même ! (Life is not much, really) (Henry 1977
: 152)

d. Qu'est-ce QUE la vie ? (What's
life ?)

e. Qu'est-ce que c'est QUE la vie ?!
(Life is such a thing !)

This use of QUE is problematic, since QUE generally introduces a verbal sequence, which it does not in this case. This non-verbal use of QUE has nothing to do with its other non-verbal uses, the quantifier (a.), the comparative (b.) and the restrictive (c.) uses

2. a. QUE de roses ! (= So MANY roses)

b. Il aime les roses plus QUE
n'importe quelle autre fleur. (= He likes
flowers more THAN any other flower)

c. Elle n'aime QUE les roses. (= She
likes ONLY roses)

which can be reconciled (as for the comparative use)

¹ I want to thank D. C. Le Flem, who accepted to read and to comment this paper.

² NP will be used here with a broader meaning to include infinitive verb phrases.

with a verbal context, or doesn't need to be (as for the quantifier and the restrictive uses, because of their belonging to different grammatical classes than that of verbal QUE).

Moreover, the deviation that (1.) represents with respect to the general pattern of QUE's uses seems to bring little to the structure, since QUE is almost always optional.

This paper will seek mainly to define the distribution of QUE. This structure will be analyzed as a dislocation that can be coreferential only with the pronoun CE, which explains not only the general distribution of QUE but also a number of constraints on the structure. We will claim that the right-hand dislocated NP has the status of theme, as a mean to explain the use of QUE only with right-hand dislocations.

2. The dislocation analysis

Dislocation may be defined as a paraphrastic relationship between a base sentence S with a constituent X (3. a., 4. a.) and a derived sentence S' with a pronoun P that fulfills X's function and refers to X, which is "outside" S' (3. b., 4. b.)

- 3. a. [S ... X ...]
b. X(i) [S' ... P(i) ...]
- 4. a. Mary likes John
b. John(i), Mary likes him(i)

Dislocation as defined here entails neither movement nor any sort of surface structure modification whatsoever, but only a relationship of paraphrase between sentences (cf. Schachter 1985). Identity of base and derived sentences is not required, as morphological adjustments are allowed for.

C'EST AC QNP may be analyzed as a derived dislocated sentence, as it corresponds in all cases to a base sentence NP EST AC.

- 5. a. C'est quelque chose que cette construction!
b. Cette construction est quelque chose !

The pronoun CE fulfill QNP's function and refer to QNP in this structure. The coreferential status of CE in

environments with a moved NP has been convincingly argued by Heldner (1989). (Although the argument does not hold in environments with moved S

6. a. C'est cette construction qui est difficile.

b. * (Ce) qui est difficile est cette construction.

this is of no interest to us since QUE never introduces such S

7. C'est cette construction (* que) qui est difficile.)

It is the only pronoun with which QUE + NP is compatible.

8. a. C'est leur bonheur à eux que cette sale pitance. (Cendras, B., 1957 : Du monde entier au coeur du monde, Denoel, Paris, p. 28)

b. * Il est leur bonheur à eux que cette sale pitance.

c. C'est une belle ville que Bénarès. (Tabucchi, A., 1987 : Nocturne indien, Christian Bourgeois, Paris, p. 52)

d. * Il est une belle ville que Bénarès.

This is corroborated by the fact that where CE is still marginally acceptable as subject (Grévisse 1975 : 504), QUE + NP will be acceptable

9. a. Ce semble une chose difficile que cette construction.

b. * Il semble une chose difficile que cette construction.

c. Ce demeure une chose difficile que cette construction.

d. * Il demeure une chose difficile que cette construction.

Therefore, it is necessary to relate QUE + NP the CE. It would account for the general distribution of QUE, which is only dislocated from the subject of the verb ETRE (TO BE), since CE, as a coreferential pronoun of a dislocated NP, can only be a subject of ETRE. It would also account for a number a constraints on the structure as well.

2.1. AC articles

CE does not allow an AC noun without an article³

10. a. C'est un linguiste que Paul !
- b. * C'est linguiste que Paul !

When CE is absent, however, the AC noun may have or not have an article

11. (Une) construction difficile que celle-là !

It must be noted that, maybe in connection with this, AC nouns can hardly be quantified

12. a. * C'en est un, d'imbécile, que cet imbécile-là
- b. ?? Ce sont plusieurs imbéciles que ces imbéciles-là

2.2. Agreement of adjectival AC

The adjective in AC is severely restricted due to agreement rules

13. a. C'est merveilleux que cette histoire.
- b. * C'est merveilleuse que cette histoire.

When C'EST is present, only a masculine adjective is possible. It cannot be feminine, whatever the gender of the dislocation is, since it must agree with its subject, the masculine pronoun CE. To use a feminine adjective, we would have to use the feminine third person ELLE, but that would make the use of QUE impossible since only CE permits it.

When C'EST is absent, however, the choice exists between the agreement or the non agreement of the adjective.

14. a. merveilleux, cette histoire
- b. merveilleuse, cette histoire

³ There are two counterexamples to this : the insult form "C'est maire et ça ne connaît personne de la ville !" (He's mayor and he doesn't know anyone in the city) ; the use of certain abstract nouns in archaic expressions, "C'est pitié que de voir une chose pareille !" (It is a pity to see such things !)

as long as *QUE* is absent, since it blocks agreement

15. a. merveilleux que cette histoire.
 b.* merveilleuse que cette histoire.

There is a noticeable semantic difference between the agreement and the non agreement of the AC adjective, especially for animate NP.

16. a. merveilleux, cette Barbara.
 b. merveilleuse, cette Barbara.

while in (16. b.) the adjective refers to the dislocated NP per se, in (16. a.) the impression is that it refers not to the NP itself but to some property of the NP ; thus, (16. a.) states that 'Barbara' is 'marvellous' not because of some inner property but because of what she does, says, knows, etc.. Therefore, (a.) can be paraphrased by and only by (17.),

17. C'est merveilleux, tout ce qu'elle
 peut faire (/dire, /savoir, etc.), cette
 Barbara.

while the agreed form (16.b.) can only be paraphrased by (18.)

18. Barbara est merveilleuse.

Reading (17.) may be paralleled with examples such as (19.)⁴

19. C'est triste que cette fille qui se
 prostitue.

where the AC adjective comments on the dislocated NP, it doesn't describe it. Thus, (19.) isn't paraphrastic with (20.a.) but with (20.b.)

20. a. Cette fille qui se prostitue est
 triste.
 b. Le fait que cette fille se
 prostitue est triste.

2.3. Dislocated PP

The impossibility of having personal pronouns (PP) as dislocated phrase has been argued to dismiss the

⁴ (19.) was brought to our attention by D. C. Le Flem.

dislocation analysis (Vinet 1991 : 11) since PP are typical candidates to dislocation

21. a. * (C'est) un crétin que (moi, toi, lui)
 b. * (Ce sont) des crétins que (nous, vous, eux)

This impossibility could be explained by the claim that the structure is compatible only with CE, and not with other PP, as has been observed. This is indirectly confirmed by the fact that the only pronoun that can be used as PP and that is acceptable as a dislocation is CELA,

22. Lieux communs stériles que tout cela.
 (Weinmann, H., 5/10/91 : "Péril en la demeure", Le Devoir, Montréal, p. D4)

which is obviously compatible with CE. It is important to relate the impossibility of dislocated PP to the whole structure, and not to CE alone, since in the latter case we should have dislocated PP when CE is absent, which we do not.

There is however, one and only one case where a PP can be dislocated.

23. Ce que c'est que de nous !

This is an important case, as it threatens our whole analysis of the structure, which stands so far on the alleged difference between CE and other PP. However, it doesn't, because NOUS can only be QRHD when preceded by DE

24. a. Ce que c'est que DE NOUS
 b. * Ce que c'est que NOUS.

Whereas other NP in this particular construction can be used with or without DE

25. a. Ce que c'est que de la vie.
 b. Ce que c'est que la vie.

Moreover, (23.) can only be used to express positive or negative astonishment. So it could be argued that it is a fully lexicalized case, that does not hinder our analysis.

AC must have an evaluative reading for the structure to be acceptable (cf. especially Vinet 1991). It doesn't allow for a pure record of facts and the only reading for an otherwise neutral statement such as (26.)

26. C'est une linguiste (que) Barbara.

is that of (27.a.) and not that of (27.b.)

27. a. C'est toute une linguiste (que) Barbara.

b. Barbara est une linguiste.

(28.) seems to be a counterexample to this

28. Qu'est-ce que la linguistique ?

But (28.) actually is evaluative : as a rhetorical interrogative, it can only be used by a one who knows the answer, as a mean to present one's point on a topic.

4. The thematic status of QUE + NP

There's a general constraint specifying that the dislocated NP must have a definite reference. Thus, indefinites are generally excluded from it

29. a. * C'est emmerdant que n'importe quoi (/ *quelque chose, / *certaines personnes).

b. * C'est un emmerdeur, qu'un ami de sa soeur. (Le Flem 1992)

The indefinite article has only a generic reading in that position

30. C'est emmerdant qu'un ami.

The constraint on the NP is brought about by the fact that it is the theme of the sentence. Themes are old information about which something new - the rheme - is said. As is well known, old information is not presented with indefinites. Moreover, as has been shown by Heldner (1989) on independant grounds, rightward dislocations are usually thematic, leftward ones being rhematic. This would allow to explain both the impossibility for QUE to attach to a leftward dislocation - it would have to attach only to thematic dislocations - and the continuous prosodic pattern - which is typical of thematic dislocations (Heldner 1989 : 109).

Notice as well that QUANT, which lexically belongs to the class of conjunctives, is used today solely as a thematic marker. Maybe QUE has the same role here.

5. QUE and ETRE

Vinet (1991 : 9) has perceived that certain uses of the construction AC, NP ! can correspond to a paraphrase with the copula HAVE.

- 31. a. Des yeux superbes, cet enfant !
- b. Cet enfant a des yeux superbes.

However, the presence of QUE completely rules out the HAVE interpretation to the benefit of the BE one ; thus, (32. a.) can only have the (32. b.) non-sensical interpretation and never that of (31. b.)

- 32. a. Des yeux superbes que cet enfant.
- b. Cet enfant est des yeux superbes.

Notice that certain relatives and conjunctives can be used without a verb - outside coordination and question-answer cases, where the verb can be traced back to the immediate context - if and only if they refer to the minimal event BE

- 33. a. A quoi bon ?
- a'. A quoi cela est-il bon ?
- b. Trois linguistes dont Barbara s'y intéressent.
- b'. Trois linguistes, dont Barbara est, s'y intéresse.
- c. Quoique jeune, elle est jolie.
- Bien que
- Parce que
- Puisque
- c'. Quoique elle est jeune, ...
- Bien que
- Parce que
- Puisque

6. Two counterexamples

We have found, in our corpus, two examples which are apparently irreconcilable with the analysis presented so far.

- 34. a. Ceci [l'inexactitude de l'affirmation que le pidgin est inapproprié pour exprimer la pensée logique] montre combien il s'agit là d'une attitude irresponsable que de prétendre que certaines

variétés de langage sont sans pouvoir. (O. Ikomé, "Vers une théorie de la sociomorphologie du processus de pidginisation", from the integral text read at the 12th Quebec Linguistic Association Congress, held at Montreal U, May 13 1992).

b. ça fait justement partie du pacte de dépendance et d'assujettissement, que ne pas penser. (Jacob, S., 1991 : L'obéissance, Seuil, Paris, p. 214)

The first sentence is a little clumsy. When asked to judge on its well-formedness, J.-M. Léard (p.c.) proposed spontaneously to change it to "C'est une attitude irresponsable que de ...". As for the second sentence, which is much better, it can be changed to "C'est une partie du pacte ..." without changing much of its meaning. Thus, the two counterexamples could be claimed to have been formed in reference with the general pattern of the structure.

7. Conclusion

We have studied the structure C'EST AC QNP, as illustrated in (1.). We have suggested that the structure is to be analyzed as a thematic right-hand dislocation. We have seen that CE is a necessary element to the structure, since only CE permits the use of QUE and helps define its distribution. It furthermore explains the general impossibility to use PP in the structure, and the rejection of adjectives in AC by certain speakers due to agreement problems.

We haven't explained the necessary relationship between CE and QUE. We haven't treated the surface syntax and specific interpretation of each instance of the general structure. But more importantly, further research should try to explain why is QUE used here, what is its role and what is its relationship with other uses of QUE.

8. References

Grévisse, M., 1975 : Le bon usage, Duculot, Gembloux.

Hatcher, A. G., 1968 : La construction française "C'est une folie de" faire cela", Antonio Quilis, dir., Actas XI congreso internacional di linguistica y filologia romanicas, Antonio Quilis, t. 3, Madrid, 1245-1250.

Heldner, C., 1989 : "Le sujet grammatical dans les constructions impersonnelles", *Studia neophilologica*, 61, 89-115.

Henry, A., 1977 : Etudes de syntaxe expressive, Université de Bruxelles, Bruxelles.

Le Flem, D. C., 1992 : "Syntaxe génétique et construction en "c'est"", presented at the 5ième colloque de psychomécanique du langage, to be published.

Regula, M., 1966 : "Espèces et formes de la mise en relief et de l'anticipation", Cahiers Ferdinand de Saussure, 23, 120-138.

Schachter, P., 1985 : "Daughter-dependency syntax", Syntax and semantics, 13, 267-299.

Vinet, M.-T., 1991 : "French non-verbal exclamative constructions", Probus, 3, 1, (26 p.).

MORPHOLOGY

Tarahumara Reduplication: the grammaticalization of iconic intensification

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I. Introduction

Reduplication is an extremely common phenomenon in human languages, if not universal. Edward Sapir includes reduplication as one of his six major morphological processes in Chapter IV of his classical essay *Language* (1926) . He says,

Nothing is more natural than the prevalence of reduplication, in other words, the repetition of all or part of a radical element. The process is generally employed, with self-evident symbolism, to indicate such concepts as distribution, plurality, repetition, customary activity, increase in size, added intensity, continuance.
(1926:76)

Studies of reduplication in English (Haas 1942, Thun 1963, and cf. also Malkiel 1978) have generally been conducted in the context of sound symbolism and have most often centered on reduplicating ablaut pairs like shilly-shally and willy-nilly. But reduplication may ease over into grammar as well. For example, it is quite clear, that a single "knock..." is not usually sufficient to invoke the desired "Who's there?" response that is necessary for a *Knock-Knock* joke to proceed in English.



Figure 1.

It is also evident with little reflection that the reduplicated forms in Figure 1 express a content that we might traditionally call 'iterative' semantic aspect in English, characterizing three events with high periodicity. These examples also show that in addition to the more codified grammatical category involving reduplication in English syntax, where word repetition expresses iterativity, there is an iconic value lurking in there as well; iterated *form* reflects iterated *content*; or stated more generally, *more* correlates with *more*.

Reduplication is a much more prominent grammatical device in Tarahumara, a Southern Uto-Aztecan language spoken in Mexico, than it is in English, although early English apparently contained a great deal more morphological reduplication than English does today. Tarahumara reduplication expresses a motley array of seemingly unrelated aspectual/modal/participant distinctions similar to that mentioned by Sapir for languages in general. Some patterns of reduplication in Tarahumara are productive and still clearly iconic; others are grammaticalized reflexes of earlier productive reduplication and tend to be more codified in their functions. But though their earlier iconic functions show some semantic bleaching, in most cases they still retain an element of imitation in their semantics.

This range of direct correlations between content and expression can be seen to define a scale extending from *iconic/nonce* to *arbitrary/grammaticalized* with functional points or areas in between.

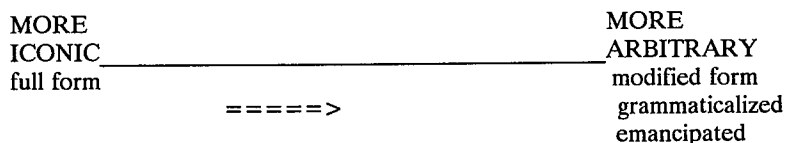


Figure 2

Haiman (1991) has invoked the 'compost heap' metaphor in his discussions of such non-structural properties of language, stating that older elements tend to move to the right on the scale as they are *emancipated* from their more iconic functions by repetitive use. Other researchers have focussed on the dynamic and emergent aspects of grammar in their envisionment of the nature and description of language, finding it necessary to slacken the strict Saussurean distinction between use and code. Also the recent work being published under the rubric *grammaticalization* (cf. Traugott and Heine 1991) is often helpful in understanding the constant movement of linguistic elements, with time, across the scale from more iconic to more codified.

As Figure 2 indicates, reflexes of reduplication in Tarahumara are sometimes faithful phonological copies, but more often they show phonological modification (intensification or attenuation), and are therefore sometimes difficult to

recognize as reduplication. In some cases the phonological adaptation obscures the original reduplication so extensively that the paired *plain* and *reduplicated* forms appear at first glance to be suppletive. As we will see in a moment, such instances may require internal reconstruction in order to establish their status as belonging together with the more obviously reduplicating patterns.

In this paper I will first describe and give some examples of the major *phonological patterns* of reduplication in Tarahumara and then proceed to an examination of the *range* of semantic functions that are invoked by the patterns. In *substance* these functions range from largely iconic to largely arbitrary, and in scope they are operative either holistically over a semantic proposition or affect only parts of the proposition; but in some cases the functional scope is broader than a single proposition. After surveying the major types of discourse content expressed by reduplication in Tarahumara, I will want to claim that there is a unifying principle governing its semantics.

Reduplication is, of course, not exhaustive in expressing this semantics; the device is just one of a number of possible ways of expressing the semantics of INTENSIFICATION in the language (cf. also Copeland 1988). I will attempt to demonstrate briefly that the functional dimension *plain* versus *intensified* involves variant semantic manifestations when it is signaled within (i) different lexical classes, in (ii) different parts of the proposition, or in (iii) different contexts of the discourse, and that its phonological realization also varies while maintaining an underlying iconic constancy: more/*intensified* expression accompanies more/*intensified* content.

II. Patterns of Reduplication: *Expression*

It is possible to analyze Tarahumara phonological words as having a basic CV-CV-CV pattern of structure in its canonical shapes (even though there are currently some variations on this pattern). The major pattern of reduplication involves the stressed copying of the first CV sequence; thus $C_1V_1- \Rightarrow C_1V_1-C_1\acute{V}_1-$ as in items 1. - 3a.

1. yó-ma 'to be angry'
- 1a. yo-yó-ma 'to be very angry'

2. hú-ma 'to run'
- 2a. hu-hú-ma 'to race'

3. wí-'ma 'to bind with a rope'
- 3a. wi-'wí-ma 'to lasso'

This basic pattern is very old, and apparently some traces of it still occur, at least marginally, in most if not all of the extant Uto-Aztecan languages.

Seldom, however, does the reduplicative pattern involve solely the stressed repetition of the first syllable. Additional phonological modifications, accom-

panying syllable replication, within the scope of the word include either phonological *intensification* and/or a concomittant phonological *weakening* of the immediately contiguous syllables, as in item 4.

4. ri-pí-ma 'to stay'
 4a. *ri-'tí-bi-ma 'to stay (frequently, habitually)'
 4b. i-'ti-bí-ma 'to stay (frequently, habitually)'

In this case we can identify a pattern that involves repetition of the initial C_1V_1 - of the root, accompanied by intensification of the reduplicating syllable $-C_1V_1$ - (by fortication and preglottalization), together with the weakening of the immediately following syllable, $-C_2V_2$, (by voicing/lenition). The word initial syllable, which is always unstressed in the reduplicated form is often weakened to a whisper, and the onset consonant is thus frequently attenuated or lost.

Multisyllabic forms frequently show a stress alternation that still reflects the apparently original pattern of intensified stress on the reduplicating syllable:

5. bo-cí-ma 'to fill up (on food)'
 5a. o-'pó-ji-ma 'to fill up repeatedly'

This feature of earlier reduplicating patterns explains both the strengthening of the consonant in the stressed reduplicating syllable and the weakening of the unstressed immediately post-reduplicative syllable. It also makes it easy to understand the loss of the initial consonant, since the initial syllable is always unstressed. Stress tends to occur late in the word in Tarahumara (the default position is the penultimate, but often the ultimate bears the stress), and for this reason there is a tendency across the lexicon for the initial consonant of multisyllabic words to be lost.

Accordingly we would reconstruct the initial pattern of reduplication for item 4. as indicated in 4a., as having a stressed reduplicating syllable, and posit a subsequent analogical shift of the stress to the right in the attested 4b. The stress pattern has thus been leveled to agree with the stress penultimate arrangement in the plain form (4.) Figure 3 summarizes the alternations represented in the reduplicative pattern for item 4. [C_{in} = intensified consonant], and [C_{wk} = weakened consonant]:

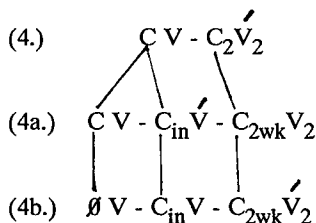


Figure 3

A reconstruction of this reduplicative stress pattern for items 6a. and 7a. locates the original stress on the reduplicating syllable and shows that the stress has subsequently shifted rightward to the penultimate in the reduplicated forms. But note that an alternating stress pattern is still maintained for the pair:

6. ri-si-méa 'to tire'
 6a. i-'ti-sí-ma 'to tire a lot' (freq/hab/iter) *ri-'tí-si-mea
7. bi-ni-méa 'to learn'
 7a. i-'pi-ní-ma 'to study' *bi-'pí-ni-mea

Similarly for forms like item 8. the stress pattern has apparently shifted rightward one syllable to the penultimate in the reduplicating form, with the shift occurring *after* the weakening of the post-reduplicating syllable:

8. no-ki-méa 'to do, make'
 8a. o-no-gí-ma 'to do, make' (pl) *no-'nó-gi-mea

Item 9a. shows an analogical stress shift to the right in the reduplicated form, that takes place *before* the post-reduplicative consonant (-C₂) is weakened:

apu nakoga bahima tam ci onorúame ci i'tikirima aré pa
 when fight drink we us great father us dist-punish mod
 '..when we fight while drinking, god could well punish us (people)...

9. ri-kí-ri-ma 'to arrange pay'
 9a. i-'ti-kí-ri-ma 'to punish' *ti-'ti-kí-ri-ma

Thus many reduplicating forms no longer show the earlier patterns of stress alternation, but do in fact show traces of the alternations in the syncopated sequences of intensified and attenuated onsets of the affected contiguous syllables. A large number of pairs that otherwise would be seen as suppletion thus demonstrably also involve phonological reduplication, like for example those of item 10, all three of which occur with frequency in my texts:

10. be-^hté- 'to dwell'
 10a. e-'pe-ré- 'to dwell' (pl)
 10b. pe-ré 'to dwell' (pl) [reduced form]

The examples that I have cited thus far have all involved verbs, but nouns also exhibit reduplication with the same basic patterns described above, for example item 11. shows the analogical stress shift away from the reduplicating syllable:

11. mu-kí 'woman'
 11a. mu-mu-gí 'women' (pl/dist)
 11b. u-mu-gí 'women' (pl/dist)
 11c. o-mu-gí 'women' (pl/dist)

Item 11c. shows a weakened (assimilated) reduplicated syllable at word onset that has begun to obscure the original phonological reduplication. In many cases in Tarahumara this process has isolated the reduplicated syllable sufficiently that it gets reinterpreted, not as reduplication, but as an augmenting vowel with a semantics similar to that of the original full reduplication. This result can be clearly seen in forms like those in item 12., where a loanword from Spanish has been partially reshaped to 'nativize' it, analogically substituting the generalized vowel augment /i-/ for the otherwise to be expected reduplicated vowel /a-/. Other vowels appear in this position as augments, but apparently /i-/ is more widespread because of the prevalence of reduplicated forms containing an original /i-/ (cf. also item 13.).

12. ka-pi-táne 'leader'
 12a. i-'ká-bi-ta-ne 'leaders' (pl/dist)
 12b. i-gá-pi-ta-ne [variant] 'leaders' (pl/dist)
13. ra-'í-ca- 'to talk'
 13a. i-'tá- i-ca- 'to talk a lot'
 13b. i-'tá- i-ca-me 'a loquacious person'

Isolation of shape by phonological modification and analogical substitution contributes in a significant way to the ongoing process of grammaticalization. The previously iconic forms in items 12a. and 13a. have lost an increment of the imitative symbolic value that was present as long as the quality of the reduplicated vowel was retained.

Some pairs of forms exhibit even less transparent reduplication because of extensive phonological modification. For example the forms in item 14. are at first glance taken to be suppletive:

14. reó 'man'
 14a. re'téi 'men' (pl/dist)

Phonologically more explicit variants of these forms include (in increasing order of strength of articulation in discourse context):

- 14*. re-hó-i 'man'
 14a*. re-té- -wi 'men' (pl/dist)
- 14'. re-hó-wi 'man'
 14a'. re-té-ho-wi 'men' (pl/dist)
- 14#. re-há-wi 'man'
 14a#. re-té-ha-wi 'men' (pl/dist)

All of these forms occur in Tarahumara texts; they represent different strengths of articulation in different contexts of discourse. They exhibit a progressive weakening, involving first vowel assimilation and then syllable syncope. This

progression can be seen in the sequence 14#. to 14. (in the reverse sequence).

In some cases, particularly in onset syllables containing /n/, the original syllable reduplication is obscured by the loss of initial /n/ followed later by metathesis.

'we a-'ná-wa-me iwé
intens freq-angry girl(s)
'girls get angry a lot'

- 15a. a-'ná-wa-me 'to get angry' (intense/freq)
15b. na-'á-wa-me 'to get angry' (intense/freq) (metathesis)

III. Content of Reduplication: *Substance and Scope*

In analysing more fully the variety of semantic content of the reduplicating mechanism in Tarahumara, it would be necessary to distinguish between, on the one hand, the *meaning* or *substance* of the various oppositions signalled by reduplication and, on the other hand, the *domain* or *scope* of the oppositions, i.e. the *range* of propositional material or grammatical elements over which they obtain (cf. Huang 1988:6). Here I will only be able to give limited number of examples directed toward understanding the *substance* of reduplication of *Activities, States, Entities, and Circumstances*. I will otherwise be able to say very little about scope, but let me just add that the language permits *verbal forms, nominal forms, adjectivals, and adverbials* all to participate in reduplication:

Frequency

tamuhé sinibí 'wé i'mé-to-ame pa tomóbile ba
you-pl always inten freq/hab-drive automobile
'You guys sure drive around in the truck a lot.'

16. mé-to-ma 'to drive (livestock, vehicle)'
16a. i-'mé-to-ma 'to drive frequently/habitually'

Iteration

co'marí mire'pá o'pocíma apusí korúa ba co'marí ba
deer up freq-jump when desire deer
'The deer jumps again and again whenever he wants to.'

17. po-cí-ma 'to jump'
17a. o-'po-cí-ma 'jump again and again'
18. (me)-có-ma 'to hit'
18a. (me)-co-có-ma 'to pound' (again and again)

Degree of Intensity

19. (me)-có-ma 'to hit'
 19a. sínépi (me)-co-có-ma 'to hit hard once'(interrupted)
20. té-ma 'to kick/be kicking' (te-sí-a irrég)
 20a. te-ré-ma 'to kick/be kicking hard/repeatedly'
21. kó-remá 'to hurt'
 21a. o'kó-remá 'to ache' (intense pain)
22. mo'o-gó-ma '(my) head hurts'
 22a. mo'o-gó-ko-ma '(my) head aches, (I) have a *pounding* headache'
23. rara-gó-ma 'soles of feet hurt'
 23a. rara-gó-ko-ma 'soles aching intensely'
24. ci'mi-gó-ma 'lip hurts'
 24a. ci'mi-gó-ko-ma 'lips ache'
25. ra'me-gó-ma 'tooth hurts'
 25a. ra'me-gó-ko-ma 'teeth ache'

Habitual/Tendency

- 'we o'mocí
 intens hab-sit pl
 'They just sit around all the time'
26. mo-cí-ma 'to be' (sitting position) pl exec
 26a. o-'mo-cí-ma 'to sit habitually/frequently' (pl exec)
27. ko-^hci-méa 'to sleep'
 27a. o-ko-ci-méa 'to sleep often/habitually'

Plurality or Distributed: Quality/State/Activity

- | | |
|---|-----------------------------------|
| e ^h ká a ^h tiki rehói | e ^h ká o'mocí re'téi |
| many sit-sg man | many dist-sit dist-men |
| 'A lot'a guys were there' | 'There were a lot'a people there' |
| (sitting together) | |
28. a-^htí 'to be' (sitting position) sg
 26. mo-cí- 'to be' pl exec
 26a. o-'mo-cí- 'to be' pl/dist
29. ro-sá-ka-me 'white' (sg/pl)
 29a. o-'to-sá-ka-me 'white' (pl/dist)

Plurality or Distributed: Entity

Executor:

30. bi-ni-rá 'little sister'

30a. i-'pí-ni-ra pl/dist

Oblique:

31. e-pó 'mesa'

31a. e-yé-po 'mesas' (pl)

32. ku 'firewood'

32a. kú-ku 'some firewood' (dist)

Distributed Circumstance: location

e'megábi e'perébo aréko

dist-far dist-live-pl mod

'We will probably put our dwellings at some distance from each other'

33. me-^hká 'far'

33a. me-^hka-bé 'very far, farther'

33b. e-'me-gá-bi 'at distant intervals' (distributed)

Discussion

Huang (1988) has demonstrated in a comprehensive typological study of *Aspect* that oppositions like those that we have identified here as being signaled by Tarahumara reduplication fit naturally under the broader category of *aspect*, since they all represent a speaker's way of looking at activities/happenings or states as either *FOCUSSED* [= holistic/tightly organized] or *DIFFUSE* [=granular/loosely organized]. She shows convincingly that aspect is not in principle constrained to temporal distinctions (cf. for example, Jakobson's notion of aspect as involving exclusively contours of internal event time). Most traditional views of aspect take the basic opposition of perfective/imperfective as a point of departure. Huang's demonstration that aspect can in fact *not* be limited to temporal oppositions echos a similar conclusion by Wallace (1979) in his study of verbal inflection in Jakarta Malay. (cf. Also Davis 1983, and Huang and Davis 1986).

The use of a *singular formal mechanism*, namely reduplication, to signal the class of aspectual oppositions that we have identified above, strongly suggests that there may be a unity of the semantics as well. We can briefly summarize the semantics of reduplication in Tarahumara by plotting the variety of content as follows, showing the plain forms as sharing the property of concentration or *unity* and the reduplicated forms as sharing granularity or *diffuseness*:

PLAIN FORM

specific activity/state
 single event
 single action
 holistic activity
 unity of location
 singular entity
 focussed plural entities
 TIGHT UNIT
 ONE

REDUPLICATING FORM

generalized activity/state
 iterated event
 frequent action
 scattered activity
 distributed location
 plural entities
 distributed plural entities
 LOOSE CONGLOMERATE
 MANY

Figure 4

While the forms in which intensity is signaled by reduplication have for the most part undergone a grammaticalizing movement from *iconic* to *codified*, over time, a remnant of the historical iconism is maintained in the grammaticalized elements. And it is because of this retention that the seemingly diverse semantics of reduplication continues to be governed by the single principle of *intensification*, albeit within the aspectual opposition *unified ... distributed*. The underlying semantic constancy has grown out of this more general iconic principle, i.e. that *more is more* (and *less is less*).

Seen in this light, the opposition *plain..versus..intense* in items 19.- 25. above, in which a degree of heightened intensity is signaled by reduplication, appears to be exactly counter to expectation in its aspectual alignment:

PLAIN FORM	REDUPLICATED FORM
Unified/Focussed	Distributed/Diffuse
?! <nonintense>	<intense>
<----->	

Figure 5

Intuitively we would expect the plain form to be *intense* (or more *focussed*) and the reduplicated form to be *non-intense* (or more *diffused*). So why does *Intensified* in fact appear to line up with *Diffuse* and *Nonintensified* appear to line up with *Unified*? The answer lies, I think, in the semantics of *INTENSIFICATION*. For example, in comparisons of dissimilarity (cf. Copeland 1990), the various mechanisms available for expressing intensification (including adverbial forms) function to push a value from a stated or an understood *norm* EITHER toward the *deficit* side OR to the *excess* side, as is illustrated in Figure 6. (There is no device in Tarahumara separate from forms signaling *intensification* for expressing comparisons, i.e. there is no *comparative* morpheme as such, either bound or free).

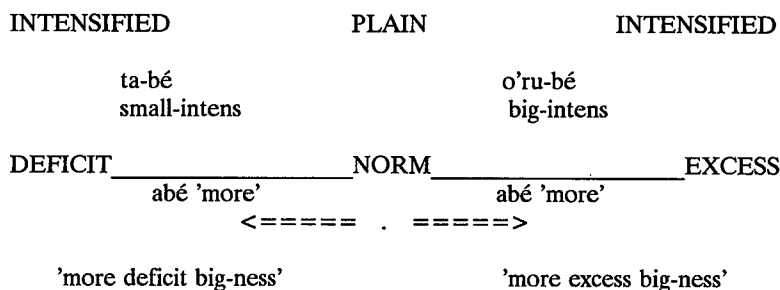


Figure 6

For this reason intensification, either by reduplication or by intensifying adverbials, can, in Tarahumara, signal EITHER *diminution* OR *augmentation* of the semantic value of the root.

Intensified Deficit: Diminution [=Less]

- 34. tá 'small, short'
- 34a. *ta-ta (small-small)
- 34b. té rī (small-small) [reduplicating syllable with dim. ablaut]
- 34c. te bé rī (small-intens-small)
- 34d. pi-tí-rī-bí-pi (dimin-small-small-intens-small)

Intensified Excess: Augmentation [=More]

aga'rára hu aré garí
 intens-good be mod house
 'I think the house is very good/better.'

- 35. ga-rá 'good'
- 35a. a-ga-rá 'intens-good, good pl/dist'

Thus, taking the plain (non-reduplicated/non-intensified) form as the *NORM* enables us to see that the reduplicated forms that express more intensity (cf. items 19.- 25.) conceptualize, for the most part, a *more EXCESS focussed* event/state than their plain counterparts; whereas the reduplicated forms that express the more distributed aspectual semantics (cf. the remainder of items 16.- 33.) conceptualize a *more DEFICIT focussed* [=more diffuse] proposition or event/state/entity/quality/circumstance. Indeed in many cases only the larger discourse context enables construal of the intensification as either diminution or augmentation of the affected value. In both cases the reduplication signals intensification and is iconic in the sense that more in sound signals more in content.

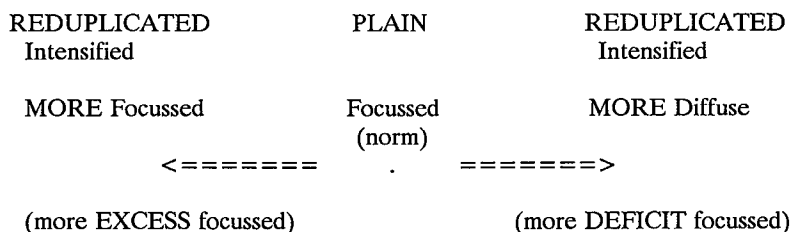


Figure 7

It also becomes easily apparent that *intensification* is not in principle restricted to either augmentation or diminution AWAY FROM the norm. Thus in English a *trúck-trùck* is a MORE prototypical truck, as in:

36. "I don't mean a big *tractor-trailer*, I mean a *trúck-trùck*."

37. "I don't mean a little *Toyota*, I mean a *trúck-trùck*."

This mechanism is very productive in English. In such cases the reduplication *intensifies* the values of the NORM and signals a more typical value than the unreduplicated form (cf. Figure 8).

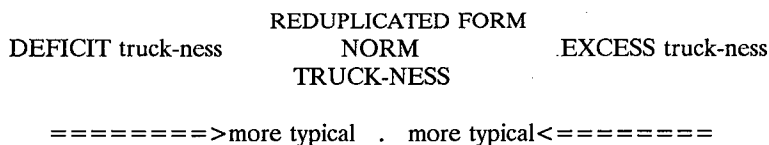


Figure 8

With this reduplication type, *more* is still *more*, but the more-ness of intensification pushes the values *toward* the norm instead of away from it.

The reduplicating mechanism in Tarahumara that accomplishes a similar intensification uses a different phonological reduplicating pattern from those that we have examined thus far. Rather than reduplicating the onset of the root morpheme, this pattern involves a suffixed syllable with the generalized form /-kV_α/. The vowel / V_α / reduplicates the quality of the vowel in the immediately preceding syllable in an exact harmony.

38. sunú 'corn'

38a. sunú-ku

39. muní 'beans'

39a. muní-ki

- | | |
|-----------------------|-----------------|
| 40. sonó 'corn stalk' | 41. tewé 'girl' |
| 40a. sonó-ko | 41a. tewé-ke |
| 42. atá 'bow, weapon' | |
| 42a. atá-ka | |

The semantics of this pattern is in some ways very similar to that of the English pattern in *trúck-trúck*, but it is not as highly marked as the English pattern.

VI. Conclusion

Reduplication in Tarahumara is very widespread, sophisticated and delicately complex, much more so than can be adequately elaborated here. But I have attempted to survey the major phonological patterns and give an indication of the content of the oppositions expressed by reduplication in Tarahumara, leaving for another discussion the scope of its semantics in propositions.

Reduplication is seen to be *iconic* to varying degrees ranging from largely *imitative* to largely arbitrarily *codified*. One of the major processes by which movement is evident across this dimension is *grammaticalization*. Partial or complete isolation of the original phonological shape of reduplication contributes to this process. And yet for both the more iconic forms and the more codified forms of reduplication in Tarahumara, a common iconic content can be identified, namely that of *intensification*. Intensification plays a major role in other parts of the grammar as well, e. g. the expression of comparisons. The grammaticalized semantic categories participate in shaping the contours of the *aspectual system*; a system that can be presented as a way of conceptualizing the semantics of propositions or parts of propositions as either *holistically organized* or more *distributed* in its focus.

REFERENCES

- Brambila, David. 1952. Gramática Rarámuri. Mexico:La Buena Prensa.
- Copeland, James E. 1988. Comparisons of Similarity in Tarahumara. The Fourteenth LACUS Forum 1987. Ed. By Sheila Embleton. Lake Bluff, Illinois:Lacus. 248-260.
- Copeland, James E. 1990. Intensification and Metaphor in Tarahumara Comparisons of Dissimilarity. The Sixteenth LACUS Forum 1989. ed. by Michael Jordan. Lake Bluff, Illinois:Lacus. 335-345.
- Davis, Philip W. 1983. Essay on Language ms.
- Givón, Talmy. 1980. Ute Reference Grammar. Ignacio, Colorado:Ute Press.

- Haas, Mary. 1942. Types of reduplication in Thai (with some comparisons and contrasts taken from English). *Studies in Linguistics*. 1.4.1-6.
- Haiman, John. 1991. Life, the universe, and human language. Paper in the Symposium on Language and Its Cognitive Interpretation. Rice University. April 1991.
- Huang, Lillian M. 1988. Aspect: A General System And Its Manifestation in Mandarin Chinese. Taipei:Student Book Co., Ltd.
- Huang, Lillian M. and Philip W. Davis. Remarks on aspect and Mandarin *le*. Paper presented to the Southeast Conference on Linguistics, Auburn. April 1986.
- Lamb, Sydney. 1958. NorthFork Mono Grammar. PhD. Diss. University of California, Berkeley.
- Malkiel, Yakov. 1978. From phonosymbolism to morphosymbolism. *The LACUS Forum 1977*. ed. by Michel Paradies. Columbia, South Carolina:Hornbeam Press. 511-529.
- Miller, Wick. 1990. Gramática Guarijio. ms.
- Thun, Nils. 1963. Reduplicative words in English; a study of formations of the types tick-tock, hurly-burly, and shilly-shally. Uppsala.
- Traugott, Elizabeth and Bernd Heine. 1991. Approaches to Grammaticalization. vols. I,II. Amsterdam:Benjamins.
- Wallace, Stephen. 1979. Voice, mode, or aspect? The semantics of verbal inflection in Jakarta Malay. In: *Contributions to Grammatical Studies:Syntax and Semantics*. ed. by Linda Waugh and Frans van Coetsem. Leiden:Brill.

THE MEANING OF THE DATIVE CASE IN RUSSIAN

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0. Introduction

Russian nominal inflection exhibits six distinct case forms: nominative, accusative, genitive, locative or prepositional, instrumental, and dative. In addition some declensions have two presumably relic cases, a second genitive and a second locative. Roman Jakobson (1958) introduced the notion that each of these cases is related to a *Gesamtbedeutung* or fundamental meaning which is present in each of its usages. Any nuances or connotative meanings can be deduced from context. He subjected each of the cases to functional analysis and reduced the *Gesamtbedeutungen* to a set of binary semantic distinctive features. In particular, he described dative as [- Quantified, + Directional, + Marginal].

Though I was impressed from the beginning by the functional analysis and the concept, I have never been convinced by the description. First, it is my general conviction that functional and structural analysis are both necessary for a complete description, and Jakobson's structural analysis in this case is rudimentary, if not entirely absent. Second, I have never been convinced that all linguistic oppositions are binary or that Jakobson's "binary" marking system is binary in a mathematical sense.² Third, I do not like his choice of semantic features. As a result, I tended toward the more conservative mode of sememic role analysis for Russian syntax. This did not give the morphemic cases of Russian a single meaning in all contexts. Instead, each of the marked cases (other than nominative) is the neutralization of a small set of sememic roles. This is less satisfying than Jakobson's analysis in some ways, but I contented myself with two thoughts. First, morphology is some distance from semantics, and the possibility of neutralization grows with each stratum. Second, this was only a preliminary description, drawn by analogy to English syntax, mainly for purposes of teaching Russian to native speakers of English. As such it is effective and need not be completely accurate.

Jakobson's proposals remained with me. When I completed my description of Russian locus expressions, I realized that most of the usages of the morphemic cases in Russian syntax are at least compatible with their locus functions. Perhaps the clearest case of compatibility is found in the usages of instrumental and dative (hereafter D).⁴ I therefore present a representative set of locus and non-locus D usages and outline my sememic role analysis with all its problems. I then shift to an analysis of locus usages and show how the locus description accounts for both the good and problematical parts of a more traditional analysis.

1. The Data

In Russian D is the formal mark for certain verb complements and the objects of certain prepositions. A representative sample of predicate complement types is given in (1)-(6).

- 1) *Ja napisal sestre pis'mo.*
I wrote a letter to my sister.
- 2) *Igor' kupil zene podarok.*
Igor bought a present for his wife.
- 3) *Mat' pomagaet synu.*
The mother is helping her son.
- 4) *Borec kazetsja bratu slabym.*
The wrestler seems weak to my brother.

- 5) *Vanja ucitsja anglijskomu jazyku.*

Jack is studying English.

- 6) *Zena raduetsja vesne.*

My wife rejoices at springtime.

Two prepositions, *po* 'down, along' and *k* 'toward', govern D. Several other words or phrases, called 'prepositional expressions' by the Academy Grammar, also govern D. These include *blagodarja* 'thanks to', *soglasno* 'according to', *navstrecu* 'to meet', *naperekor* 'to spite', and *vopreki* 'in spite of'. More examples could be adduced, but no strikingly different contexts will appear.

These data constitute a representative sample of the usages of D in Russian. I now present a case grammar analysis of some of them. This is a description I have used in teaching Russian to speakers of English.

II. A Case Grammar Analysis

I call this a "case grammar analysis" for two reasons. First, Fillmore's "case grammar" was developed in the context of Chomskyan linguistics (henceforth C-lin). In this context, "deep cases" are assumed to be universal and to have parallel realizations in different languages. Second, the inventory of "deep cases" was developed for English, then applied to other languages.

This approach is linguistically unsophisticated, but it is useful for teaching Russian to native speakers of English. I provide the students with a description of the English sentences, then transfer the description to parallel Russian expressions. Thus D communicates RECIPIENT (RC) in the translation to (1) and BENEFICIARY (BN) in the translation to (2). The D in (3) could be treated as either RC (the one who receives the help) or BN (the one who benefits from the help) or as the neutralization of the two. All three explanations make sense to the students. The D in (4) is the EXPERIENCER (EXP).

Unfortunately, however, the free ride from English ends here. English provides no clue to the D in (5) or (6). English has a simple object in (5). Because of the lack of morphological case on the object, little (or perhaps too much) can be said about Russian on the basis of English. Similarly, the English sentence in (6) uses a locus expression. Conversely, the Russian has no preposition, a requirement for locus expressions in Russian (cf. Sullivan 1986).

Now consider the prepositions that govern D. Case grammar in the C-lin mode has little to say about these, none of it particularly useful. Something like Bennett 1975 has much more to offer. But the idea of grafting the analysis from one language onto the structure of another has its limits. It may be useful for the restricted purposes of pedagogy, but it cannot be expected to provide a complete description. That must be sought inductively, within the language itself. I begin the analysis of Russian with the D prepositions.

III. Locus Analysis of D Prepositions

The prepositions *po* 'along' and *k* 'toward' are exhaustively analyzed in Sullivan 1984. *Po* + D realizes LOC & LGT & GO (LOCUS, LENGTH, GOAL) and *k* + D realizes LOC & GO (Sullivan 1984: 245). In the generalized description (final draft currently under preparation) D is shown to be the unmarked realization of GO in the context of locus expressions. This description is based on so much data that it is most convincing. Moreover, it is apparently without exception. In the unsatisfactory and incomplete description outlined in section II, the non-locus D usages were described first, and the locus usages were left until after. But the non-locus description shed no light on the locus data. Under these circumstances, it is reasonable to try the reverse. That is, apply the locus description to non-locus usages. It is possible that the complete and convincing locus description will clarify the non-locus usages.

As mentioned above, the *Gesamtbedeutung* of D in locus usages is GO. The hypothesis, therefore, is that GO is also the *Gesamtbedeutung* of D in non-locus usages.

Consider first the prepositional expressions *blagodarja* 'thanks to', *soglasno* 'according to', *navstrecu* 'to meet', *naperekor* 'to spite', and *vopreki* 'in spite of'. I begin with *navstrecu*.

Navstrecu is actually a prepositional phrase (*na* 'onto' + *vstrecu* 'meeting [in the accusative]') written as a single word. It is itself analyzable as a locus expression (cf. Sullivan 1985) which includes a goal. Written as a prepositional phrase and with no complement, *na vstrecu* is translated 'to a meeting'. I assume that *navstrecu* + N_D is merely *na vstrecu* with a nominal complement in D, i.e. an additional GO complement. However, given that additional complement, as in *navstrecu materi/ej* 'to a meeting mother_A /her_D', the specific context in which *na vstrecu* occurs is different. The interpretation should therefore shift slightly. Before we go any farther, we must consider what that shift might be.

Consider that *na vstrecu* is itself a goal expression. Thus it is not surprising that it may take a (redundant) GO complement. In fact, redundant GO complements to goal expressions are common in Russian, as in (7).

7) *Ja polozil knigu na ruku emu.*

I lay book on hand he_D

I put the book_A in his hand.

D complements like those in (7) are traditionally called datives of possession, perhaps because of the translation. But this is anomalous. Contemporary Russian has two sorts of possessives: adjectival and substantival. The possessive adjectives may be pronominal or denomininal, but they are true adjectives and agree with the noun modified in gender, number, and case. The substantival possessives may also be pronominal or nominal, but they all take the genitive. There is no productive usage of D for possession, outside of examples like those in (7). Moreover, there is no need to posit a dative of possession. The ownership of the hands is predictable from context and is never in doubt. If *emu* is the person GO and *ruku* is the specific surface GO, the 'he' referred to by *emu* must be the possessor of the hand that is the surface.⁵ Like *na ruku emu*, *navstrecu ej* is an example of a locative goal expression which takes a person GO as a complement.

At the same time, the English translation of *navstrecu ej* as 'to meet her' becomes clear. Nominal complements of non-verbal expressions exist in English. But they are normally realized as prepositional phrases (e.g. 'to a meeting with her'). Only verbs normally take bare complements: hence the shift from nominal or gerundive 'meeting' to verbal 'meet'.

The meaning of *navstrecu* + D is thus predictable from the lexical meanings and the *Gesamtbedeutungen* of the locus expression and of D.

Like *navstrecu*, *soglasno* 'according to', makes sense with a GO complement, and its meaning in constructions with D is predictable. *Soglasno* is an adverbial form whose root, as seen in the noun *soglasie*, means 'with a (= one) voice' and betokens agreement or accord. With a nominal complement in D, the interpretation is amplified. The noun is the GO of the agreement. When a noun N appears in a construction like N *soglasno* N_D, N has N⁶ as the goal of its agreement, hence the translation 'according to'.

Blagodarja 'thanks to', *naperekor* 'to spite', and *vopreki* 'in spite of' can be considered together. All of them express attitudes toward others, the former positive and the latter two negative. In morphological form *naperekor* and *vopreki* are possible prepositional phrases, like *navstrecu*. However, *perekor* and *prek* do not exist in the contemporary language. Conversely, *blagodarja* is a present adverbial participle, normally translated as '(while) giving thanks'. The complements of these three expressions are always D, i.e. GO. The use of a simple, non-locative goal as the complement of an expression that communicates one's attitude toward someone else is perfectly reasonable. It is also structurally productive. In Pushkin's *Mednyj vsadnik* 'The Bronze Horseman', Peter I (= "the Great") decides to found a city *na zlo nadmennomy sosedu* 'to spite our haughty neighbor' (line 14). Again this is structurally parallel to the "dative of possession" construction discussed above.

In sum, both semiotic and structural analyses of Russian prepositions and prepositional expressions shows that they are compatible with D as a realization of GO. Moreover, the meaning of these expressions is a predictable modification of the combination of the meaning of the expression itself with GO. It now remains only to deal with verbal complements.

IV. Locus Analysis of Predicate Complements

The reanalysis of D usages from a locus perspective has been, up to now, monosemous. Conversely, the description given in section II was polysemous. That is, the D complements of different verbs were assigned to different sememic roles. The D complement is called RC in (1), BN in (2), RC or BN in (3), and EXP in (4), and is a mystery in (5) and (6). All of these complements are realized as an object in D with no preposition and no restriction on linear order. The initial hypothesis should properly be that all of them realize the same sememic role. The current hypothesis is that they all realize GO. I take them in order.

The recipient, as in (1), receives the object, i.e. is the goal of the patient. The beneficiary, as in (2), is a kind of indirect recipient, i.e. is the eventual goal of the patient. Example (3) was the source of some confusion between RC and BN, but not in the present description: the object is the goal of the (helpful) activity. The EXP in (4) is now the goal of the impression of weakness my brother got. The English language in (5) is the goal of the study.⁵ Finally, the verb in (6) expresses an attitude toward its object. The object is the goal of that attitude. This is a verbal parallel to the use of D with the complement of prepositional expressions that express an attitude.

In sum, the present description is three ways better than my pedagogical description in section II. First, the D on objects in (1)-(6) is predictable from GO. Second, a single sememic role is much simpler than three. Third, GO not only explains the D complements in (1)-(4) unambiguously, it also accounts for (5) and (6), which were a mystery to the previous description. So by Hjelmslev's three criteria (consistency, completeness, simplicity), the present description is preferable to the pedagogical one.

V. Summary and Conclusion

Analysis of the locus expressions of Russian leads to the conclusion that D is the unmarked realization of GO. The application of GO to non-locus usages of D provides a monosemous description that predicts the meanings of these complements in all verbal and prepositional contexts and is simpler than another proposed description.⁶ The implications for the structure of Russian are clear: the usages of other Russian cases in non-locus expressions should be reexamined in light of the locus analysis. Some very interesting results are likely.

NOTES

¹ Contrast this with his structural comments in Jakobson 1929.

² It ends up binary [$\pm$] but starts out with three choices: positively marked for (+), negatively marked for (-), and unmarked for (o). No matter how I count it, that adds up to 3.

³ A strange complaint for a stratificationalist who usually gives labels second place to relationships. However, in the present case I assume that the labels here signify relationships to particular points in a semantic hierarchy, which makes them more significant than usual.

⁴ Actually, the case for instrumental may be better, but it would also be considerably longer to present.

⁵ (7) suggests a contrast between Russian and English treatments of possession which is interesting but beyond the scope of this study.

⁶ As Halliday 1976 suggests for *the teacher taught the student English*.

⁷ In fact, students in my structure course this year found it an acceptable and easily comprehensible description of the facts.

⁸It is also simpler than descriptions not discussed above. The other descriptions I have seen are, like my pedagogical description, unable to account for a number of usages which the locus analysis predicts, e.g. 'apiece'.

⁹Sullivan 1978 criticizes a description of certain Russian phenomena discussed in Rugaleva 1978, because of shortcomings I saw in the localist hypothesis on which it is based. I have reread and reconsidered the observations in Sullivan 1978, and I cannot say that any of them should be modified. But in light of my own extensive analysis of Russian locus expressions I must bow to Sebastian K. Shaumyan, who developed the localist hypothesis for Russian, and say that my conclusions about the localist hypothesis will have to be reconsidered.

REFERENCES

- Bennett, David C.
1975 *Spatial and Temporal Uses of English Prepositions*.
- Halliday, Michael A. K.
1976 'The Teacher Taught the Student English': An Essay in Applied Linguistics. In *The Second LACUS Forum, 1975*, Peter A. Reich (ed.), pp. 344-49. Columbia, SC: Hornbeam
- Jakobson, Roman
1929 *Remarques sur l'évolution phonologique du russe, comparée à celle des autres langues slaves*. TCLP II. Reprinted in *Selected Writings*, vol. I: 7-116. The Hague: Mouton
- 1958 *Morphologičeskie nabljudenija nad slavjanskim sklonenijem* (Morphological observations on Slavic inflection). In *American Contributions to the Fourth International Congress of Slavists, Moscow, September, 1958*, Henry Kucera (ed.), pp 127-53. 's-Gravenhague: Mouton
- Rugaleva, Anelja
1978 Nominalization in a Localist Framework. *Forum Linguisticum* 3:1-24
- Sullivan, William J.
1978 A Response to 'Nominalization in a Localist Framework' by Rugaleva. *Forum Linguisticum* 3:73-76
- 1984 Russian Locus Expressions: Dative. *Forum Linguisticum* 8:231-49
- 1985 Russian Prepositional Phrases of Locus: Locative. In *The Eleventh LACUS Forum, 1984*, Robert A. Hall, Jr. (ed.), pp 201-14. Columbia, SC: Hornbeam
- 1986 Russian Prepositional Phrases of Locus: Instrumental. *Language Sciences* 8:17-36

LEXICOGRAPHY

HALLEUJAH
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Hallelujah (Heb. *halēlū yāh*) is usually translated 'praise (ye) the LORD' aut sim. The verb root is *h-l-l*, and *halēlū* is the plural imperative of the piel form of the verb. The verbal noun *hillel* 'praise' shows the full piel, with the vowel pattern *-i--ē-* and doubled middle *l*. (We shall use *hillel* to refer to the piel forms of this verb regardless of the actual vocalization.) With regard to *halēlū*, there is a general rule that the sequence *-vllēlv-* becomes *-vlēlv-* and is later pronounced *-vllv-*. For example, *ʔāhalēlāh* '(I will extol (God's name))' (Ps. 69.31a) becomes *ʔāhallā* (Bauer and Leander 1962.436). That this is a late development is shown by the Greek spelling *allēlouia*, where the *l* is doubled and has the full vowel *ē* after it.

The piel form of the verb often indicates the putting into effect of that action or state which is indicated by the plain form (*qal*) of the verb. In the case of *hillel* we have no record of the plain form, so we don't know what we are putting into effect. This is what we are trying to find out.

There are several *h-l-l* roots listed for Hebrew: 1. *h-l-l* (*hip.*) 'let shine, shine'. 2. *h-l-l* (*pi.*) 'praise', (*pu.*) 'be praised', (*hit.*) 'boast'. 3. *h-l-l* (*qal*) 'be confused, deluded', (*po.*) 'make a fool of', (*hitp.*) 'behave as if insane'. We are concerned only with the second. Derivation of it from the first, which has been proposed, seems unlikely if 'shine' is the actual meaning. (For the Hebrew verb forms and abbreviations thereof see the grammars.)

Hillel is used of people as well as of deities. Abraham's wife Sarah is 'praised' to Pharaoh by his courtiers (Gen. 12.15). Absalom was 'admired' (*lēhallēl*) for his handsomeness (2 Sam. 14.25). A husband 'praises' a diligent wife (Pr. 31.28). In the reflexive (*hitp.*), it means 'boast'.

We may paraphrase 'praise' as 'to say nice things about', but this provides no solution to our problem. 'To speak well of' can be used as a paraphrase in nearly all instances, so the Hebrew contexts do not seem that helpful. There are, however, hints that something more is involved. *Hillel* is frequently used in poetry, and here parallelism plays a major role: segment two in some way reflects segment one. The meaning may be close,

contrastive or expansive. We find a number of verbs which occur parallel to *hillel*. For example: 'I will extol (*ʔāhalēlāh*) God's name with song, and exalt him (*ʔāgaddēlennū*) with praise (*tōdāh*)' (Ps. 69.31; quotations use the Tanakh translation, except when modified by the course of the argument). Here *hillel* is translated 'extol', and the parallel factitive (*piel*) of *g-d-l* 'great' is given as 'exalt' (lit. 'make great'). *gādōl* is 'big, great' and is often used of God. Other verbs used parallel to *hillel* include:

ʔ-š-r (pi.) 'declare (s'one) happy' (Pr. 31.28 TNK),
'acclaim' (SS 6.9 TNK).

z-m-r (pi.) 'play an instrument, praise' (Ps. 135.3, 'sing hymns' TNK).

y-d-h (/w-d-h) (hiph.) 'praise, thank' (Ps. 35.18).

k-b-d (pi.) 'honor' (Ps. 22.24 TNK).

r-w-m (qal) 'be high', (pol.) 'exalt' (Ps. 107.32 TNK).

š-b-ḥ (pi.) 'extol' (Ps. 117.1 TNK).

The verb most frequently used in parallel with *hillel* is *y-d-h*.

Two of these roots, *g-d-l* 'big' and *r-w-m* 'high' are clearly physical terms and ascribe to God earthly characteristics. This may also be the case with *k-b-d* 'heavy', but the verb has taken on a derived meaning, 'to make heavy' = 'to honor' (see Leslau 1987.273 for the Semitic cognates).

Another hint that we are dealing with the attribution of a physical characteristic to God comes in the use of 'name of the LORD' instead of simply 'LORD', as in "Hallelujah. O servants of the LORD, give praise (*halēlū*); praise (*halēlū*) the name of the LORD' (Ps. 113.1). Here *hallelujah* has become a fixed phrase, and is so treated in the translation. In the next sentence one adds 'name'. The reason for this is seen in the early tendency to avoid attributing physical characteristics to God, including such obvious ones as hands and feet. So instead of hilleling the LORD, you *hillel* the name of the LORD. Paraphrases to avoid such anthropomorphisms are found in the earliest translations, those into Aramaic and Greek (Buhl 1892.120, 174).

Verbs also occur in series, as in 'to invoke, to praise and to extol the LORD God of Israel' (I Chr. 16.4), the verb roots being respectively *z-k-r*, *y-d-h* and *h-l-l*. *z-k-r*, usually thought of as 'remember', is here used in the sense of recalling to people's minds the past deeds of the one being praised. It shows clearly that we are often dealing in the Hebrew text, as we are elsewhere in the ancient Near East, with what we are now familiar

with as 'praise poetry' (cf. Finegan 1970.111-46). Heb. *təhillāh*, from the root *h-l-l*, is used of a praise poem, sung in honor of someone, e.g., of King Josiah (2 Chr. 23.12; 'acclamation' TNK), of brides (Ps. 78.63). The masculine plural form, *təhillīm* is the Hebrew title of the Book of Psalms.

All of this is pretty tenuous, and more data are needed if we are to make a rational conjecture as to what the earlier meaning of *hillel* was. We turn, then, to comparative evidence. The most promising line of approach is the examination of possible consonant ablaut forms of the root both in Semitic and in related languages. The proto base is ***h-l*, the Hebrew forms so far adduced showing reduplication of the *l*. The consonant ablaut pattern is:

	Proto	Attested	Proto	Attested	Proto	Attested
1.	<i>**h-l</i>	<i>h-l</i>	2. <i>**h-lH</i>	<i>h-r</i>	3. <i>**h-Nl</i>	<i>h-n</i>
4.	<i>**hH-l</i>	<i>C-l</i>	5. <i>**hH-lH</i>	<i>C-r</i>	6. <i>**hH-Nl</i>	<i>C-n</i>

(Whether sequences with ***Nh* occurred is not known.)

In examining possibly related words having forms of *h-l*, we find that there are two main semantic groups: 1. those specifying physical properties and 2. those describing sounds made orally. Sometimes there is insufficient evidence to say which is meant. There is the possibility that one of these semantic areas is derived from the other. We feel that it is highly probable that this is so. For our purposes here we shall assume that oral attribution of physical characteristics has led to the verb being later associated, in some languages, primarily with making oral sounds. Another Hebrew root used in parallel with *h-l-l* is that for 'sing' (*š-y-r*, Jer. 20.13).

We first examine some Semitic examples of the ablaut forms. (Numbers refer to the ablaut chart above.)

1. ***h-l*. Sem. **h-l-l*, G. *tahalala* 'utter cries of joy', Ar. *hallala* 'rejoice', Heb. *h-l-l* above, Aram. *hallel* 'praise', Syr. *hallel* 'rejoice', Md *h-l-l* 'utter cries of joy', Akk. *atlulu* 'shout *alāla*', etc. (Leslau 1987.217). These examples reflect the oral aspect of the ***h-l* semantics. A physical activity is attested by Ar. *halla* 'to appear' (of the new moon). This implies that *h-l-l* 'shine' derives from the rising of the moon or other shining body.

2. ***h-lH*. Heb. *har* 'mountain', Phon. *h-r* 'hill' (see below).

3. ***h-Nl*. Cf. Ar. *hanna* 'wail', possibly Sabaean *h-n-?* 'pleasing', with the assumption that the meaning is not quite

understood properly.

4. ****_{hH}-1**. In Semitic *C*-1 refers to something high or something above: Ar. *ʿaliya* 'to be above', *ʿalā* 'to go up', *ʿalā(y)* 'on top of', Ug. *C*-1-*y* 'to go up', *C*-1 'over', Heb. *ʿalāh* 'to go up', Aram. *ʿalā* 'go up';, Syr. *ʿalli* 'raise', Akk. *elū* 'to go up', G. *laʿala* 'be high' (most from Leslau 1987.303-4). The name *ʿelyōn* 'the one who is above', usually translated 'most high' as in *ʿēl ʿelyōn* 'God Most High' (Gen. 14.18), shows how closely *hillel* fits with the *C*-1 forms if it is translated 'exalt' (TNK 'extol').

5. ****_{hH}-1H**. Ar. *CurCuration* 'summit, top of a mountain', with reduplication. Heb. *C*-*w-r* (*qāl*) 'stir oneself, be awake', (po., hiph.) 'stir up, arouse'. The upward movement designated by *C*-1 shows that Heb. *C*-*w-r* is better rendered 'get up'. Compare the series of verbs in Psalm 7.7: 'stand up! (*q-w-m*)... rise up! (*n-s-ʔ*)...get up! (*C*-*w-r*)' ('rise... assert Yourself... bestir Yourself TNK). A word *ʿār* occurs twice in the Hebrew text, where it is thought to designate someone inimical: 'adversary' (1 Sam. 28.16 TNK), 'enemies' (Ps. 139.20 TNK). This has long been a crux, but it is perfectly standable if taken from *C*-*r* (or *C*-*w-r*) in the sense 'to stand up against, to rise up against'. Similarly, Heb. *qām* 'one rising up against' (Ex. 15.7 'opponents' TNK) is from *q-w-m* 'stand up'.

6. ****_{hH}-N1**. Ug. *C*-*n-t* '(the goddess) Anath' has a logical etymology as 'the high one (f.)'. Heb. *ʿanan* 'cloud', as something high and overhead, belongs here. With prefixes we have: ****_(b-)hH-N1(-C₂)** Tna. *baʿnānā* 'to start up' (Leslau 1987.90), ****_(θH-)hH-N1** G. *šaʿana* 'to load' i.e., 'to put up on', Ar. *zaʿūn* 'pack camel' and related forms (Leslau 1987.543). (We shall add some other Semitic forms below as the semantic development of the base is seen to unfold.)

Some of the data from other branches of the Lislakh phylum are:

1. ****_h-1**. There are a number of Egyptian words with the consonants *h*-3 (i.e., *h*-1). The verb *h*-3-*ʔ* 'to go down' we leave out as semantically difficult, but see Leslau on *b-r-k* (1987.105). A very frequent *h*-3 is classified as an exclamation and translated 'ha!', 'ho!', 'O!'. Examination of the passages in which it occurs and consideration of it in the ****_h-1** ablaut pattern show that it is rather to be rendered 'get up! aut sim. For example, 'Up (*h*-3), O Pepi, wake up, rouse yourself, stand up so that you may be purified' (Pyr. 837ab P: cf. Faulkner's translation, 1969.150). here *h*-3 is used in parallel with other like-minded imperatives. The same sort of exhortation is found in the Book of the Dead, using *h*-3 (or *h*-*y*, with the *l* to *y* shift): 'Up, Osiris so-and-so, rouse yourself on your bier!' (cf. Allen's translation 1974.178).

There is, in fact, a spell which has 'rouse (or, raise, *s-č-z*) yourself' about fifty times (Allen 1974:214). These were magical formulae recited in order to resuscitate the deceased. We may compare the manner in which idols were addressed among the Jews: 'Ah, you who say, "Wake up" to wood, "Awaken" to inert stone!' (Hab. 2.19). Here 'awaken' is *ʕūrī*, better translated 'get up!', as we have seen above.

Co. *hlouhlōou* /hluhlō:w/ 'to be high' is a reduplication of *h-1*. Vycichl correctly thinks of Sem. *ʕ-1-y* but realizes that the Egyptian does not have *ʕ-* (1983:297). Consonant ablaut shows how *hlouhlōou* from ***h-1* and *ʕ-1-y* from ***hH-1* are related.

Eg. *h-3-t* (later *h-y-t*) 'ceiling, sky', *h-3-t* (*h-y-t*) 'portal, gateway' and Co. *haeit* /háyt/ 'entryway, pylon' are all from ***h-1*. There have been other derivations suggested for *haeit*, but *h-3-t-y-w* aut sim. is in our opinion more likely (cf. Vycichl 1983:293 and references). These words, referring to 'that which is high and therefore over one' or 'that which is high relative to one', show that Sem. *ʔ-h-1*, as in Heb. *ʔōhel*, Phon. *ʔ-h-1*, Ug. *ʔ-h-1*, 'tent' also derives from ***h-1*. (Ar. *ʔahlun* 'family, people' is a further semantic specialization.)

Forms from other branches of Lislakh are less certainly assignable to consonant ablaut formulae because of the frequent loss of *h* and *ʕ*. In Berber we have Tou. *alu* 'big' (presumably from 'high') and Tam. *aly* 'climb', *alay* 'ascending', which may be from either ***h-1* or ***hH-1*. Chadic **y-1* 'to stand up' is probably from ***hH-1*, as initial *h-* seems to be preserved. Compare Ha. *hau* 'mount, get on' (*1* to *w?*), *hayīl* 'roofing, thatch' and Bye *hai* 'mount' (with *1* to *y*). Cu. **hai-* 'adult animal'.

At least part of the items assigned to IE **al-* 'to grow' come from ***h-1* or ***hH-1*. Lat. *altus* 'high, deep' fits well, as does Germanic **aldā-* 'old'. It is possible to fit the words meaning 'to nourish' into the ***h-1* mold as 'to make get higher, to make grow'. It is just as likely that **al-* with the lexemes presently attributed to it is the result of a merger of different bases.

2. ***h-1H*. Cu. **r-w* 'to rise', Iraqw *ar* 'big'. IE **er-* 'to set in motion', Skt. *ṛ* 'move, rise, tend upwards'.

3. ***h-N1*. Possible Egyptian forms are *h-n* 'box' (i.e., something with a cover 'over' the contents), *b-h-n* 'fan', Co. *bōhən* 'to cover; canopy' (with prefix ***b-*). Ber. **ahwin* 'to get up on'.

4. ***hH-1*. Eg. Dem. *ʕ-1* 'go up, get on', Co. *ale* 'go up, get on', *ōl* 'lift up'. Eg. *ʕ-3* 'great, senior', *ʕ-3* (*ʕ-y*) 'excess', *ʕ-3* 'column, pillar', *ʕ-3* 'door', *ʕ-3-t* 'tumor'.

('raised place'). Vycichl associates Ber. *ali* 'go up' with C_{-1} (1983.6). Cu. *C_{al-} 'top, peak' (D 140); ECu *C_{al-} 'mountain'.

5. $\text{*}^h\text{H-1H}$. Eg. C_{-r} 'to go up', ?_{-C-r-t} 'uraeus cobra', $\text{C}_{-r-r-w-t}$ 'gate', ECu *C_{ir-} 'sky, rain'. IE *or- 'set in motion', Lat. *oriri* 'to rise', Hitt. *arai-* 'rise', *aru-* 'high'. *or- and *er- are considered to be variants of the same root. Here *er- is assigned to $\text{*}^h\text{H-1H}$ and *or- to $\text{*}^h\text{H-1H}$. Note that the Canannite letter for C became o in Greek.

6. $\text{*}^h\text{H-N1}$. Eg. ?_{-C-n-h} 'eyebrow', as 'that which is over', with prothetic alif and suffix $-h$. Compare Ber. Tou. *ener* 'eyebrow', though this is more likely to be from $\text{*}^h\text{H-N1(-1H)}$.

We conclude that the base behind the verb in hallelujah was $\text{*}^h\text{H-1}$ and that this base meant 'to be high'. The factitive Hebrew form *hillēl* meant 'to cause something to be high, to exalt, to raise on high'. It refers to the physical raising of some object in space, and the meanings 'praise, jubilation', etc. are derivative, even down to Ar. *harra* 'to bark'.

It remains to say a few words about the implications of the approach followed here for the investigation of long range relationships in language. The consonant ablaut forms discussed above and elsewhere were unquestionably part of the proto language, but it is not yet clear to what stage of the prehistoric era they belong. They are certainly ancestral to all of Lislakh. One of the most striking features of this phylum is the manner in which consonant ablaut enables us to clarify the relationship of hundreds of roots. If a long range comparison includes Lislakh or any portion thereof and ignores this organization of the material, it loses a key tool in the setting up of regular sound correspondences.

References

- Abdel-Massih, Ernest T. 1968. *Tamazight Verb Structure*. (African Series, 2) Bloomington: Indiana University
- Allen, Thomas George. 1974. *The Book of the Dead or Going Forth by Day*, ed. by Elizabeth Blaisdell Hauser. (Studies in Ancient Oriental Civilization, 37) Chicago: University of Chicago Press.
- Bauer, Hans and Pontus Leander. 1962 [1922]. *Historische Grammatik der hebräischen Sprache des Alten Testaments*. Vol. 1. Hildesheim: Georg Olms.
- Biblia Hebraica Stuttgartensis*. 1977. Stuttgart: Deutsche Bibelgesellschaft.
- Buhl, Franz. 1892. *Canon and Text of the Old Testament*, tr. by John MacPherson. Edinburgh: T. and T. Clark.
- Dolgopolsky, A. B. 1973. *Sravnitel'no-istoričeskaja Fonetika Kušitskix Jazykov*. Moscow: Nauka. (D)

- Ehret, Christopher. 1987. 'Proto-Cushitic reconstruction.' *Sprache und Geschichte in Afrika* 8:7-180.
- Erman, Adolf and Hermann Grapow. 1957 [1926-]. *Wörterbuch der ägyptischen Sprache*. 6 vols. Berlin: Akademie-Verlag.
- Faulkner, R.O. 1969. *The Ancient Egyptian Pyramid Texts*. 2 vols. Oxford: Clarendon Press.
- Finegan, Ruth. 1970. *Oral Literature in Africa*. Oxford: Clarendon Press.
- Hodge, Carleton T. 1988. 'Consonant ablaut in Lislakh.' *FUCUS, A Semitic/Afrasian Gathering in Remembrance of Albert Ehrman*, ed. by Yoël Arbeitmann, pp. 267-76. (Current Issues in Linguistic Theory, 58) Amsterdam: John Benjamins.
- Holladay, William L. 1978 [1971]. *A Concise Hebrew and Aramaic Lexicon of the Old Testament*. Grand Rapids: William B. Eerdmans.
- Jungraithmayr, Herrmann and Kiyoshi Shimizu. 1981. *Chadic Lexical Roots*. II. (Marburger Studien, Serie A, Afrika, 26) Berlin: Dietrich Reimer.
- Leslau, Wolf. 1987. *Comparative Dictionary of Ge'ez*. Wiesbaden: Otto Harrassowitz.
- Pokorny, Julius. 1959. *Indogermanisches etymologisches Wörterbuch*. Vol. 1. Bern: A. Francke.
- Sasse, Hans-Jürgen. 1979. 'The consonant phonemes of Proto-East-Cushitic (PEC): A first approximation.' *Afroasiatic Linguistics* 7:1-67.
- Tanakh: A New Translation of the Holy Scriptures. The Torah*. 2nd ed. 1967. *The Prophets*. 1978. *The Writings*. 1982. Philadelphia: The Jewish Publication Society. (TNK)
- Vycichl, Werner. 1983. *Dictionnaire étymologique de la langue copte*. Leuven: Peeters.

"P1 + NP + P2" PHRASES IN DISCOURSE

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1. General Remarks*. Such phrases as on the basis of, in the context of, and for the purpose of have attracted little attention from linguists (but see Quirk and Mulholland (1964)). This may be partly because they are considered fixed phrases, which need no analysis. However, these phrases present several interesting problems which require semantic/discoursal as well as grammatical explication.

The "preposition1 + NP + preposition2 (hereafter P1 + NP + P2) phrases to be dealt with here mostly allow the substitution of demonstratives for the "NP + P2" as follows:

- a. on the basis of → on this/that basis
- b. in the context of → in this/that context
- c. for the purpose of → for this/that purpose

But it seems that this substitution often depends on the context in which the phrases appear, i.e. there are conditions for this substitution. Since the demonstratives 'this' and 'that' usually refer back to something previously mentioned, we may assume, as a first approximation, that substitution of this kind has something to do with given and new information. This assumption implies that substitutability can be explained mostly on the discourse level. I shall argue for this position in more detail in due course.

2. Data. There are two kinds of data. One consists of a personal collection of examples taken from a variety of recent books (see the list on the last page of this paper). The seven works run up to approximately 720,000 words. The other consists of the Cobuild data obtained at Birmingham University in England, which is known as the "19.3 Million Book Corpus"⁽¹⁾. I shall mostly use my examples for illustration in the discussion, in general because they provide broader contexts in which the phrases occur.

3. Analysis. I have selected the following candidate phrases for the present discussion out of the dictionaries. There are considerable differences in frequency, and partly for limitations of space and time, I shall concentrate on the analysis of most frequent and interesting phrases. The following are possible candidates:

1. on the basis of
2. in the case of
3. in connection with
4. in the context of
5. in the light of

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--|---|---|---|---|---|---|---|---|---|
| 1) in terms of/in the light of | + | + | + | + | + | + | - | + | + |
| 2) in respect of | - | + | + | + | + | + | - | + | + |
| 3) on the occasion of | + | + | + | + | + | + | - | - | - |
| 4) for the purpose of/
in the case of | + | - | + | + | + | + | - | - | - |
| 5) on the basis of | + | + | + | + | + | + | - | - | - |
| 6) in the context of | + | + | + | + | + | + | - | - | - |
| 7) in connection with | + | + | + | + | + | + | - | - | + |

The table given above will give the impression that in terms of, in the light of and in connection with are more idiomatic than the others in terms of their fixedness/frozenness. The former three do usually occur in the sequence given, compared with the other phrases which occur together with their varied forms, as will be shown immediately.

Before we begin the analysis of the substitution of the 'P2 + NP2' for demonstratives, it will be useful to get an idea of the general status each word involved occupies. The following table summarises the grammatical occurrences of the words in their phrases in 200 occurrences taken out of the '19.3 Million Book Corpus' at Birmingham University. For several reasons, I have confined those five that occur most frequently.

	seq.	sub.	obj.	comp.	prep	there	dem.	etc.
					+NP	is	+NP	
basis	28	10	42	27	77	4	1	12
connection	28	28	47	7	33	24	10	23
context**	54	4	14	2	66	0	49	11
purpose	12	41	45	12	57	4	17	12
terms***	84	14	8	6	42	0	2	43

* 'Sequence' means the phrases to be discussed in this paper, i.e. on the basis of, in connection with, in the context of, for the purpose of, and in terms of.

** The phrase within the context of (13) was included in the count.

*** One occurrence was a verb usage and excluded. The total is, therefore, 199.

I should like to examine each word briefly.

The frequency of on the basis of is 14%. But if the variants, such as on the basis and on a + adj. + basis are included, the total is 79. Basis appears more frequently as complement than as subject. As regards this point, Quirk and Mulholland (*ibid.*: 159) say that in the following example, its corresponding paraphrase is not a. but b.:

On the basis of his hunch, he worked out an elaborate plan.

a. The basis was his hunch.

b. His hunch was the basis ...

When basis appears as object, those verbs that take it are 'form', 'have' and 'provide'.

Examples:

a. I remember being puzzled that he recognized me on the basis of one word, and he told me he had this gift.

b. ... to believe in giving of oneself to the community, on the basis that behaviour would provide security, respect ...

- c. Vibration is the basis of manifestation and is a fluctuating wave ...

In connection with appears with 14%. The characteristics of this word are:

- (1) It often occurs with demonstratives.
- (2) It often occurs in the there is construction.
- (3) It is mostly accompanied with genitives such as 'his/its' and the indefinite article.

Examples:

- a. This card can also be interpreted in connection with health matters ...
- b. In this connection it may be useful to share with you ...
- c. What I'm hoping, though is that there is a connection between Elton's death and Brady.

The characteristics of context are as follows:

- (1) The word often occurs in in (within) the context of.
- (2) The word is frequently used with demonstratives (24.5%).
- (3) The word does not often occur as subject, object or complement.
- (4) The word often occurs with modifiers.

Examples:

- a. In the context of cancer, the answer must be no. Cancer can be seen.
- b. A family history places the person within the context of the family of origin ...
- c. In this context, it goes without saying that we ourselves are responsible ...

The characteristics of purpose are as follows

(cf. Ivanić (1991)):

- (1) The sequence for the purpose of is not so frequent (16%).
- (2) The word is more often used with demonstratives (for this purpose (17), and for the purpose (15)).
- (3) The use of purpose as subject is frequent. The usual structure is 'The purpose of ...'.
- (4) When the word appears as object, the most frequently collocated verbs are 'have' (13) and 'serve' (10).

Examples:

- a. For the purpose of our study we may consider the mind under the three heads ...
- b. The drugs morphine and diamorphine are excellent for this purpose.
- c. The purpose of these first journeys is to travel through each country ...

About half of examples of terms are used in the sequence in terms of (about 42%). While the substitution of 'prep + NP' for demonstratives are very few,

the structure 'in the + adjective terms' is frequent.

Examples:

- a. I've no idea. I just look at these things in terms of planning applications.
- b. ... it will also include losses in terms of our dependency needs.
- c. Yes. But nobody would express it in those terms.

As has been seen from the behaviour of these words, they form more or less idiomatic structures in terms of their relatively frozen nature and low frequency as subject, object and complement. Putting it another way, these words have a low degree of nouniness (cf. Ross (1973)), or prototypicality of nouns (cf. Hopper and Thompson (1984)). We can arrange them on the gradient of idiomaticity as follows:

terms - context-basis-connection-purpose	
more idiomatic	less idiomatic

After making a general survey of the behaviour of the words in the Cobuild data, I should like to examine my data collection of phrases involving the words in question and demonstrative forms plus their variants. The following is a table of the results of classification:

	sequence	dem.+NP	variant
basis (34)	27	6	1
connection (5)	1	4	0
context (14)	4	5	5
light (20)	15	5	0
purpose (26)	6	5	15
terms (161)	115	6	40

I added the term light, partly because the word often allows substitution. Now I should like to go on to consider conditions under which substitution takes place.

Connection, context, purpose, light, basis, and terms, in that order, are used with demonstratives. Connection is more used as in this connection. Its function is connective in that the phrase in this connection introduces a new paragraph, while referring back to the previous paragraph.

Examples:

1.

- a. Of course, it may yet turn out that chimpanzees, or representatives of some other non-human species, will refute the Chomskyan hypothesis by acquiring a communication-system with the same kind and the same

degree of structure-dependency and rule-governed creativity that human languages have. So far they have not done so.

It is important to realize in this connection that to describe as quantitative what Chomsky might hold to be qualitative does not of itself solve the problem of accounting for the differences between human languages and other communication-systems.

(C: 143)

3 out of 4 examples of in connection with occur at the beginning of new paragraphs. It suggests strongly the connective function of the phrase.

Context is also used with demonstratives as in:
2.

- a. The situation in each area was no doubt the product of these and other processes. In central Asia, the second process is likely to have been the most important, at least initially, and in this context the later work of Henning on Tocharian origins is highly significant.

(AL: 208)

- b. Chinese taxidermists had long fooled (and defrauded) European mariners with heads and trunks of monkeys stitched to the hind parts of fish — one prominent source for the persistence of mermaid legends. In this context, one can scarcely blame George Shaw for his caution in first describing the platypus (1799) ...

(BB: 271)

As has been shown by evidence in the Cobuild data, context is used more frequently with demonstratives than the other words. The meaning of the word context seems to have become broader, having acquired the meaning of 'circumstances in which something happens or in which something is to be considered' (OALD). Because of this breadth of meaning, the word sometimes needs reinforcement by new information. This explains part of the reason why context is often modified or why a 'heavy NP' follows the noun.

3.

- a. It should perhaps be mentioned here, however, in advance of what will be explained below and to avoid confusion on what is a crucial point, that, in the context of Chomsky's present views 'internalized' (as distinct from 'internal') hardly makes sense.

(C: 167)

- b. But this usual story fails when we properly locate Jenkin's point about blending in the wider context of an argument that pervades the entire essay - and not simply extract the item as a kernel deserving modern notice while discarding the rest as chaff.

(BB: 345)

Purpose is often accompanied with demonstratives, as can be seen both in the Cobuild data and my data. The demonstratives are sometimes replaced by modifiers.

4.

- a. Many of the sentences which the linguist regards as grammatical (well-formed in terms of the rules set up to describe the competence of the 'ideal' native speaker) would never in fact occur 'naturally'; and, if constructed deliberately for the purpose of some linguistic experiment, will be difficult, and perhaps impossible ...

(C: 109-110)

- b. His view was that for phonological and syntactic analysis, it was necessary to know 'whether two uttered forms were 'the same' or 'different', but that for this purpose all that was necessary was a rough and ready account of the meaning of words and not a full scientific description.

(C: 33-4)

- c. When we are speaking of a polity we are not necessarily thinking of a sedentary group: a hunter-gatherer band may be regarded as a polity as much as a city state or an empire, so long as it functions as a unit and does not fall within the jurisdiction of a larger group for administrative or legal purposes.

(AL: 215)

Light was not discussed in the Cobuild data because it occurred too frequently with polysemous meanings. The word is also used with demonstratives, although the sequence in the light of is more frequent.

5.

- a. In the light of these factors, any models which we may set up are likely to be oversimplified, but I believe the effort is worthwhile.

(AL: 120)

- b. Linguistics is incorporated in psychology, therefore, not by virtue of any substantial change in subject matter or method, but for the ultimate significance of its results.

Even Chomsky's appeal to 'intuition',

which is more prominent in his later work (and which as frequently been misunderstood), can be interpreted in this light.

(C: 111)

- c. Yet, for a scholar, there is nothing quite like falsehood. Lies are pinpoints — identifiable historical events that can be traced. Falsehoods also have motivations — points of departure for our ruminations on the human animal. Truth, on the other hand, simply happens. Its accurate report teaches us little beyond the event itself.

In this light, we should note with interest that the most famous story in all the hagiography of evolution is, if not false outright, at least grossly distorted by biased reconstruction long after the fact.

(BB: 385)

Basis is mostly used in the sequence on the basis of, but is sometimes used with demonstratives.

6.

- a. There are still a few physical anthropologists who feel able to make comments about the racial affinities of prehistoric individuals on the basis of their skeletal remains but ...

(AL: 4)

- b. There is at the moment no scientifically acceptable way of taking a set of skeletal measurements and saying that a body or a skull which shows them must be assigned to a particular 'race'. The metric characteristics of different populations can be compared, and it may be possible to make inferences on that basis, but they will probably not be racial ones in any meaningful sense.

(AL: 77)

- c. Andy Jackson, as a result of his military exploits in and around the ill-fated War of 1812, became a national figure, and ultimately, on this basis, a presidential contender.

(BB: 21)

Terms is more or less idiomatically used in the sequence in terms of. In a very few cases, the word is accompanied with demonstratives. What is of interest is the frequent use of modifiers before the word. I am not sure whether or not 'in + adjective terms' is a paraphrase of 'in terms of NP'.

7.

- a. John Major was twenty-two: he had spent his whole political life in Brixton. With that background plus the natural optimism of youth, he was still thinking in terms of

winning Brixton for the conservatives.

(JM: 36-7)

- b. It is interesting, also, to enquire more closely into the origins of this nomadic way of life in the steppes. How did the steppes pastoralist economy originate? As indicated earlier, nomad pastoralism is always dependent in part on the existence of agriculturists. It is clear that nomad pastoralism normally develops out of mixed farming and herding, where a pattern of transhumance can be adapted to one of true nomadism appropriate to the more difficult environment. If the problem is put in these terms, it is clear that ...

(AL: 97)

- c. He also imposed upon the echidna, for the first time, the distinctive burden of primitivity that has continually hampered proper zoological understanding of all monstremes, the egg-laying mammals of Australia. Home described the echidna as not quite all there in mammalian terms ...

(BB: 282)

One explanation for positional variation, such as substitution in this present discussion, is found in the distinction between given/new information. This concept has been discussed extensively in the literature⁽²⁾.

According to Prince (1981), there are three types of givenness: (1) predictability/recoverability, (2) salience, and (3) shared knowledge. These concepts are more or less connected with each other. Without going into details, I should like to mention another type of givenness – topicality (cf. Givón (1990: 20. 3)). What is important, in this connection is the continuity of the topic into successive sentences, forming coherent discourse. The givenness of topicality is grammatically realised in the form of definiteness and anaphoric pronouns. In our present discussion, the form of 'prep + demonstrative + NP' performs the function of givenness of topicality. But what differentiates it from other 'demonstrative + NP' forms is that the nouns used there (i.e. basis, context, connection, purpose and terms) are context-dependent. That is, their exact meanings can often be determined only in context. These nouns, while referring vaguely to something previously mentioned, with the aid of demonstratives, serve connective functions. Unlike anaphoric pronouns, these nouns with demonstratives are less ambiguous, more numerous and more flexible in use. These advantages are

exploited usefully in academic writing where logical connectivity is required repeatedly in different guises.

In connection with the choice between 'P1 + NP1 + P2 + NP2' and 'P1 + dem. + NP1', the former phrase conveys new information, and the latter conveys given information, in that, while more focus is put on the NP2, the 'P1 + dem. + NP1' phrase refers back to something previously mentioned. Put another way, the former NP1, being in the background, forms the prepositional phrase which introduces new information, while the latter NP1, reinforced by demonstratives, is more like a pronoun. The reference by this pronoun-like NP1 is more or less clear from the context.

To use the examples given before, in the example, 2a., the phrase in this context refers back to "In central Africa ... at least initially". In the example 4b., the phrase for this purpose refers back to "to know ... different". In the example 5c., the phrase in this light refers back to "Falsehoods have motivations ... happens". On the other hand, in the example 3a., more focus is placed on "Chomsky's present view". In the example 4a., "some linguistic experiment" is in focus. In the example 5a., "In the light of these factors" can be paraphrased as "considering these factors" and "these factors" plays an important role in this context. NOTE I have used 'focus' and 'new information' interchangeably in this context.

The categories of information structure discussed in this paper include 'givenness', 'topicality' and 'definiteness'. These concepts, in opposition to 'newness', 'comment' and 'indefiniteness' (to use them rather loosely just for discussion), are allocated variously in the discourse which reflects how the writer/speaker tries to convey information effectively to the reader/hearer.

In this structure, which noun phrase is given information and which is new information is most important. As my present discussion suggests, the noun phrases which are often used idiomatically do not contain much information by themselves. When these noun phrases are used together with demonstratives, they tend to be more 'given information' only referring back to something previously mentioned. This function is connective as well, in that the continuity of topicality is maintained in discourse.

As has been indicated throughout the argument, it seems that there is a set of noun phrases which allow the substitution of 'P1 + NP1 + P2 + NP2' for 'P1 + dem. + NP1' forms and which perform both functions of referentiality and connectivity discussed here. Further investigation is needed to delimit the

range and the meanings of these noun phrases.

4. Conclusion. The purpose of this paper has been to demonstrate that the substitution of 'P1 + NP1 + P2 + NP2' for 'P1 + demonstrative + NP1' is not automatic, as is often asserted in grammar books, but that the substitution can be determined in discourse. The demonstration has been carried out by means of the Cobuild data obtained at Birmingham University and data collected by the present author. Issues discussed in grammars often become more complex, once they are cast in actual discursual moulds. For this reason, the corpus-based method used here is the most useful analytic approach to a discussion of 'P1 + NP + P2' phrases.

Notes

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(1) I should like to express my thanks to Gill Francis for printing out the words I need for the present analysis. For further information on the Cobuild data, see Sinclair (1987).

(2) Brown and Yule (1983: Ch.5), Halliday (1967), and Quirk et al. (1985: Ch.18).

References

- Akimoto, M. 1991. Deverbal Nouns in Grammar and Discourse. In A. D. Volpe (ed.) The Seventeenth LACUS Forum 1990. Illinois: Lake Bluff. 281-90.
- Brown, G. and G. Yule. 1983. Discourse Analysis. Cambridge: Cambridge UP.
- Chafe, W. L. 1974. Language and Consciousness. Language 50. 111-33.
- Cowie, A. P. 1990. Oxford Advanced Learner's Dictionary. Fourth Edition. Oxford: Oxford UP.
- Francis, G. 1986. Anaphoric Nouns. Discourse Analysis Monograph 11. Birmingham: Birmingham University.
- Givón, T. 1990. Syntax: A Functional-Typological Introduction. Vol. II. Amsterdam: John Benjamins.
- Halliday, M. A. K. 1967. Notes on transitivity and theme. Part 2. Journal of Linguistics 3. 199-244.
- Halliday, M. A. K. and R. Hasan. 1976. Cohesion in English. London: Longman.
- Hopper, P. and S. A. Thompson. 1984. The discourse basis for lexical categories in universal grammar. Language 60. 703-52.
- Ivanić, R. 1991. Nouns in Search of a Context. IRAL XXIX. 93-114.
- Prince, E. 1981. Toward a Taxonomy of Given-New Information. In Cole, P. (ed.) Radical Pragmatics.

New York: Academic Press. 223-55.

Quirk, R. et al. 1985. A Comprehensive Grammar of the English Language. London: Longman.

Quirk, R. and J. Mulholland. 1964. Complex Prepositions and Related Sequences. English Studies 45. 64-73.

Ross, J. R. 1973. Nouniness. In O. Fujimura (ed.) Three dimensions of linguistic theory. Tokyo: TEC. 137-258. Sinclair, J. (ed.) 1987. Looking Up. London and Glasgow: Collins ELT.

Summers, D. 1987. Longman Dictionary of Contemporary English. Third Edition. London: Longman.

Data

Anderson, B. John Major. London: Headline. 430 pages. (JM)

Gould, S. J. 1991. Bully for Brontosaurus. Penguin Books. 540 pages. (BB)

Hawking, S. W. 1988. A Brief History of Time. London: Bantam Press. 198 pages. (BHT)

Lyons, J. 1991. Chomsky. Third Edition. London: Fontana. 247 pages. (C)

Ranelagh, J. 1991. Thatcher's People. London: Fontana. 324 pages. (TP)

Renfrew, C. 1987. Archaeology and Language. Penguin Books. 346 pages. (AL)

Sampson, A. 1989. The Midas Touch. London: Hodder & Stoughton. 212 pages. (MT)

CENTRAL EXAMPLES OF INFORMAL VERBAL IDIOMS IN BRITISH ENGLISH*

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1. Background: the earlier London-Lund project

This study of central examples of informal verbal idioms in contemporary British English grows out of a project in characterizing the semantic/pragmatic properties of informal lexis in adult British speakers in spontaneous conversational settings (Powell Forthcoming, 1992). Since I presented the methodology and some of the preliminary results of that investigation to the LACUS Forum in 1991, I shall be brief in filling in this background. Using part of the London-Lund corpus, I subcategorized 20 settings into 16 informal and 4 formal conversational situational contexts. I defined informality and formality of setting via discourse goal and relative speaker status (Cheepen 1988); that is, as independently as possible of lexical constituency. Then, without distinguishing between slang and informal lexical varieties, but regarding both as gradable and informal, I inventoried all informally marked words and idioms. As one part of this project, I classified the resultant list of all informal unit types (i.e. not tokens) into parts of speech categories; and, with a multifunctional lexical orientation (Halliday 1970, Lyons 1977), examined all informal unit types for recurring lexical compositional constructs. All categorization was done in context.

One of the questions I asked was whether any semantic/pragmatic regularities characterized this attitudinally-motivated lexical variety. The answer is yes. Four semantic/pragmatic lexical properties recurred in patterned configurations: evaluative meaning, lexical intensity, lexical expressivity, and denotative vagueness. In fact, among the informal idioms from informal settings, configurations of these properties occurred 83% of the time. Drawing on the work of others in conversational analysis, I argued that these configurations are functionally specialized for situation-specific needs.

During the lexical analysis, my attention was drawn repeatedly to the discourse token and type frequency of the verb-initial informal idiom. The work that I shall report below builds from this observation and uses part of the inventory of informal idioms from the London-Lund study (Powell 1992: Appendix A1). Appendix 1 contains informal idioms taken from 16 informal settings. However, this list represents only the verb-initial idioms that function syntactically as main verbs or as the principle verbal

constituents in the predicate phrase. Categories 1-8 reflect the various configurations of recurrent lexical properties. Category 9, the miscellaneous category, contains items that do not pattern with the four properties.

2. The proposal and its rationale

Using these and data taken from the Oxford Dictionary of Current Idiomatic English, I shall propose very general attributes that partially constitute a schematic prototypical representative of this type of informal verb-initial idiom when it functions syntactically as a verb or as the main part of a predicate phrase in contemporary British English. The schematic representative will be abstracted from regularities that have been manifested in products of language behaviour (Lyons 1991: 22). I make no claims about mental representation; these would be ill-advised for at least two reasons. First, the conclusions that I shall reach are too data specific to warrant such speculations. And second, no other studies have considered prototypicality in informally marked lexis: either examples have been drawn from the neutral core of the vocabulary or distinctions have not been made respecting stylistic register.

However, I shall extrapolate from claims that have been made using prototype analysis (Rosch 1977 = Heider; 1978) by Hopper and Thompson (1984, 1985) and by Akimoto (Forthcoming). Hopper & Thompson (1984, 1985) define universal tendencies in the major form classes of noun and verb via prototype analysis. The nouns and verbs are correlated with perceived entities in the world, the noun being correlated with percepts of "thing"-like or "object"-like entities, the verb being correlated with percepts of actions and events exhibiting kinesis. The semantic properties of the prototypical noun correspond to those of Lyons' (1977: 442-443, 447) first-order nouns whose denotata comprise concrete, stable things that are publicly observable and that are referred to as individuals. The semantic properties of the verb denote kinetic, effective actions. Importantly, too, Hopper & Thompson claim that discourse function is "the chief factor conditioning categoriality" (1985: 152); the discourse function of the prototypical noun is to introduce participants and props and to manipulate them around; the discourse function of the prototypical verb is to report an event (1985: 159).

Akimoto (Forthcoming) has drawn on these contributions and others in prototype theory to establish more universal generalizations about the noun and verb constituents in verb + object idiomatic constructions; and he has concluded that prototype theory is useful in predicting degrees of idiomaticity and likelihood of dual readings. The more prototypical features that a noun retains in an idiomatic construction, the less idiomaticity the construction exhibits, and the more likely the idiom is to have both idiomatic and literal readings. He has also tentatively

proposed that nuclear verbs (Dixon 1982) are prototypical in idiom formation, and that when these verbs incorporate nouns, the resultant phrase "becomes verbal, taking on some prototypical features of the verb, such as activity or event" (Akimoto, Forthcoming).

My study continues in the spirit of Akimoto's; but my data are stylistically marked, and my claim will be language and culture specific. Let me explain why I have set these more restricted parameters. First, I have no quarrel with Akimoto's (Forthcoming) claims; nor do I question that idiomaticity appears to be a universal property of human languages and that universal features may characterize certain aspects of this process. However, it is also widely recognized that the gradable category of fixed expressions, of which idioms are a subcategory, is notoriously heterogeneous along virtually all dimensions of linguistic analysis. Given such extreme variation, one might anticipate that localized areas of systematicity are formed around a maximally representative example, since localized areas of systematicity appear to characterize many (if not all) nonidiomatic word formation processes in contemporary English. For example, when Lehrer (1990) tested various claims that polysemy in English may be predicted from general principles, she discovered that, even within semantic fields where one would expect to find the greatest degree of uniformity, only a few principles are exceptionless. She concluded that "the [polysemy] principles interact[ed] in complex and sometimes contradictory ways" with other principles (1990:241) but that one could discover "many miniregularities of different sorts" (1990: 238). Given these results from nonidiomatic word formation and the heterogeneity of idioms, it seemed prudent to seek "miniregularities" (Lehrer 1990: 238) without regard to whether these were or were not universals.

Another insight contributed by Barsalou's (1983) work in prototype formation in ad hoc categories also influenced my decision. Ad hoc categories "appear to be created spontaneously for use in specialized contexts" (1983: 211). Like the familiar categories of "birds" and "furniture", ad hoc categories, such as "ways to make friends", exhibit graded structures; moreover, the concepts for the ad hoc categories "contain properties relevant to the goals [my emphasis] the categories serve" (Barsalou 1983: 225). My point is not to identify idioms with ad hoc categories, but to recall the frequent observation that idioms are highly context and situation dependent, and to speculate that if context-specialized ad hoc categories are functionally organized, then prototype effects might be evident in idioms when these effects are sought (a) in a stylistically marked variety whose principal functional criteria are attitudinal; (b) when this variety is abstracted from contexts of situation that are also subcategorized functionally, (c) when this variety is subcategorized for syntactic function; and (d) when the result is analyzed from a seman-

tic/pragmatic multifunctional lexical perspective. Hopper & Thompson's (1984) insistence upon the importance of discourse function when defining prototypical nouns and verbs adds plausibility to this speculation. For these reasons, the question, "What characterizes the constituents of a prototypical verb + object idiom?" seemed to me less tractable than my question, "What characterizes a prototypical informal verbal idiom when it is functioning syntactically as a main verb or as principle constituent of the predicate phrase in contemporary British English?"

3. The schematic prototype

Although the latter question is less elegant in phrasing and narrower in conception, its advantage is that the data that determine the answer and from which I shall abstract schematic, representative attributes are very specialized in function. Since I take category distinctiveness to be both gradable and relational in conception, when constructing the schema, I aimed for characteristics that maximally identify the functional uniqueness of these informal verbal idioms as a type, and that also distinguish these central members from their closest counterpart in the London-Lund corpus, the informal nonidiomatic verb (Powell 1992: Appendix A2). I have used statistical frequencies to guide my choice of properties. However, I interpret the frequencies not as probability assessments but as speaker preferences that indicate context and situation-dependent tendencies; and I do not claim that an idiom which instantiates the schema is the most frequently occurring.

A. Directly evaluative in use/meaning

Taking the 101 items in Appendix 1 as my initial and principal database, I noticed that 79 of these, or 78%, participate in the semantic/pragmatic configurations. Evaluative meaning appears in 66% of all categories and in 67 of the 79 (85%) that pattern in the configurations. These are calculations on types, not tokens. However, token means reinforce these figures: the token mean percentages of informal idioms used evaluatively in all 20 London-Lund settings is 70.3% (S.D. 21.5%); moreover, idioms used evaluatively are informally marked 79.4% of the time. Therefore, the property of evaluative meaning (or the capacity for evaluative use) in these informal verb-initial idioms is highly salient.

In characterizing central informal verbal idioms, I would qualify this property further by specifying that it is directly (overtly) evaluative. An indirectly evaluative item in the London-Lund inventory is one that denotes socially sensitive referents. Such lexical items may be used to convey evaluative meaning without expressing this evaluation overtly; and of course, they may also be used to express evaluative meaning directly. One must examine the use in context to determine whether the evaluative meaning is overtly expressed or indirectly conveyed. Two

considerations led me to posit direct evaluative meaning of these informal verbal idioms. First, in this inventory, no informal verbal idioms appear in Category 2 which contains indirectly evaluative units. Second, if one looks at the inventory of informally marked words (i.e. not idioms) that I presented to the 1991 Forum, one will see that informal nonidiomatic verbs such as to booze, to bum, to pinch ("steal"), and to neck do not appear in Category 1 which contains directly evaluative words. Therefore, in this inventory, the distinction between direct and indirect evaluative use distinguishes the central, informal verbal idiom from its closest lexical counterpart, the informal nonidiomatic verb.

B. Lexically intense

A second property that either patterns with evaluative meaning or that occurs singly in these informal verbal idioms is lexical intensity. Of the 79 items that occur in patterned configurations, 32 (40.5%) evince this property. Informal nonidiomatic verbs also exhibit this property. Therefore, to achieve a schema that maximally distinguishes informal verbal idioms from informal nonidiomatic verbs and that also takes into consideration members in other syntactic categories which I shall not discuss here, one needs to rank the exemplars that are characterized by the two properties in the following way. Verbal idioms such as those in Category 3 that exhibit both direct evaluative meaning and lexical intensity instantiate the semantic/pragmatic aspects of the verbal idiomatic schema with the greatest degree of distinctiveness. Informal verbal idioms in Category 1 that are directly evaluative are next in distinctiveness, and those in category 4 that are intense are third in representative distinctiveness. In fact, the sole presence of lexical intensity does not distinguish them from what I speculate are central examples of informal nonidiomatic verbs which are also characterized solely by intensity. That a less central informal verbal idiom should share this property with the most distinctive nonidiomatic informal verb is reasonable. The least distinctive informal verbal idioms appear in Category 9: these are the most peripheral in semantic/pragmatic distinctiveness because they do not exhibit any of the four lexical properties that characterize informal lexis as a whole. (I defer ranking the few idioms in Categories 5-8 to another occasion; these cross-classify with noun schematic properties in complex ways.)

C. Monosyllabic

To turn now to additional characterizing properties, one can say that nearly all of the informal verbs in this inventory are monosyllabic. In 1972, Makkai observed that, in phrasal verbs, both in literal and idiomatic combinations, the most productive verbs such as come, put and take are monosyllabic verbs of motion (1972:200). His preliminary tests also indicated that the large

majority of these verbs are of Germanic origin. Cowie & Mackin (Oxford, I, 1975) call these "major verbs" for their productivity; and some major verbs also fall into the category of nuclear verbs that Akimoto (Forthcoming) speculates are prototypical in verb + object idioms. I looked to see whether this monosyllabic tendency is found in a larger inventory of contemporary British informal verbal idioms; and if so, whether the pattern is characteristic of British verbal idioms as a whole and not just of informal verbal idioms.

Taking the Oxford Dictionary of Current Idiomatic English, I examined the first 99 of 367 pages, through letter E, in Volume 1 on verbs with prepositions and particles; and the first 213 of 367 pages, through letter F, of Volume 2 on phrase, clause and sentence idioms. And I found that 342 of 372 (92%) informal verbal idioms in Volume 1 (to p. 99) are monosyllabic; and that 95 of 101 (94%) informal verbal idioms in Volume 2 (to p. 213) are monosyllabic. The most distinctive contrast in syllabic composition lies in the set of formal verbal idioms from within these pages and which appear in Appendix B. Within the designated pages in Vol. 1, only 14 out of 134 (10%) are constituted of monosyllabic verbs; so few formal idioms appear in Vol. 2 that one can say little about them except that 3 of the 4 are monosyllabic. The tendency, though, toward polysyllabic and nonnative sources for formal verbal idioms is manifestly clear.

D. Non-idiomatically prototypical, reinvested verb and/or noun

Returning again to the informal verbal idioms in Appendix 1, notice how these conform to Hopper & Thompson's criteria for prototypical nouns and verbs. With one clear exception marked with an asterisk and three borderline cases marked with question marks, the informal verbal idiom comprises at least one prototypical member: if the verb is not prototypical, then the noun in the direct object or complement or prepositional phrase is. That is, either the verb may denote a kinetic, effective action; or the noun may denote a stable, concrete, entity.

Of course, my point is not that, in their idiomatic meanings, the nouns and verbs need be paired with the literal denotata that serve the maximally decontextualized prototypical nouns and verbs in their nonidiomatic readings. It is rather that, when established lexical constituents are multiply reinvested (the term is Makkai's 1978) in idioms, the verbal idioms that become conventionalized for informal use are constituted of at least one member that is potentially a prototypical noun or verb in characteristic, nonidiomatic uses. In the informal verbal idioms, the nouns are not used to introduce an entity into the discourse and then to manipulate it around, they are used to modify or to complement the verb in ways that are visually perceptible and that often serve to overstate the case.

For discourse interpersonal reasons, lexical intensity and evaluative use in informal lexis are encoded via scalar extreme verbal activities or via modifiers that ascribe activity to the verb. Expressing personal frustrations is salutary, but whining about one's troubles is tedious and criticizing others accurately is carping; therefore, the solution is to use scalar extreme verbal activities to help tell an engaging story. Storytellers know that extreme conditions are more vividly expressed concretely than abstractly. And, since idiomaticity is a type of semantic change, and lexical semantic change tends to proceed from the concrete to the abstract, the figurative extensions of concrete, literal meanings are used to express abstract, idiomatic meanings (Makkai 1975, Sullivan 1980, Norrick 1981). Makkai describes some cases of idiomatic motivation by using the word "rhyme" (from "rhyme or reason") to denote "a set of preterlogical motivations based on degrees of similarity and metaphorical extensions or earlier adjacent, or associated meanings" (1975: 16). The origin of the idiom may be in concretely visible denotata and in concrete stories of various kinds. Both folk and linguistic etymologies recognize that the relationship between the literal constituent and the idiomatic meaning may be motivated (cf. Gibbs 1992).

In addition, Traugott's (1989: 34) first unidirectional tendency states that "meanings based in the external described situation [give rise to] meanings based in the internal (evaluative/perceptual/cognitive) described situation." Therefore, constituents that change from descriptive concrete, literal meanings to evaluative, abstract idiomatic meanings exemplify this unidirectional tendency. The tendency toward evaluative use or meaning is very strong in informal lexis as a whole. One can see other instances of this direction of change in the list of American college words that Eble (1989: 40-41) includes as examples of shifts from other registers to slang: either evaluative meaning is maintained or descriptive meaning changes to evaluative meaning.

4. Conclusion

One of the lexical theoretical reasons for looking at informal lexis is to see whether regularities help to organize this attitudinally-motivated variety. Initial investigations are encouraging. If one takes a multifunctional perspective, one can discover patterned configurations comprising four lexical properties in contemporary British English. Moreover, the distribution of these properties can reveal miniregularities that exhibit prototype effects. In an inventory derived from a corpus of 16 informal conversations, a schematic prototypical representative comprises the following properties. The functionally most distinctive informal verbal idiom comprises a verb that is monosyllabic. If the informal verbal idiom comprises only verb and particle or preposition, then the verb will be nonidiomatically potentially prototypical. If the informal verbal idiom comprises verb + noun in a direct object or complement or prepositional

phrase, then at least one of these constituents will be nonidiomatically potentially prototypical: either the noun will denote a concrete object, or the verb will denote an event or activity exhibiting kinesis. However, in its idiomatic reading, the functionally most distinctive informal verbal idiom is overtly evaluative in function, and it is lexically intense. Less central instantiations may be discerned and compared via the properties that characterize the schema. Finally, in defining lexical prototypes, Hopper & Thompson are quite right to insist upon the indispensable role of pragmatic function; however, multifunctionalism yields the most accurate characterizations within and across categories.

Footnote

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References Cited

- Akimoto, M. (Forthcoming). Prototypicality and idiomaticity. In R. Brend & R. Bailey (eds.). The Eighteenth LACUS Forum, 1991. Illinois: Linguistic Association of Canada and the United States.
- Barsalou, L. (1983). Ad hoc categories. Memory and Cognition. 11/3: 211-227.
- Cheepen, C. (1988). The Predictability of Informal Conversation. London: Pinter.
- Gibbs, R. (1990). Psycholinguistic studies on the conceptual basis of idiomaticity. Cognitive Linguistics 1/4: 417-451.
- Halliday, M.A.K. (1970). Functional diversity in language. Foundations of Language 6: 322-361.
- Hopper, P. & Thompson, S. (1984). Lexical categories in universal grammar. Language 60/4: 703-752.
- (1985). The iconicity of the universal categories 'noun' and 'verbs'. In J. Haiman (ed.). Iconicity in Syntax. Amsterdam: Benjamins. Pp. 151-183.
- Dixon, R.M.W. (1982) Where Have All the Adjectives Gone? Amsterdam: Mouton.
- Lehrer, A. (1990). Polysemy, conventionality, and the structure of the lexicon. Cognitive Linguistics 1/2: 207-246.

- Lyons, J. (1977). Semantics, 2. Cambridge: Cambridge University Press.
- (1991) Natural Language and Universal Grammar. Cambridge: Cambridge University Press.
- Makkai, A. (1972). Idiom Structure in English. The Hague: Mouton.
- (1975). The cognitive organization of idiomaticity: rhyme or reason? In R. DiPietro (ed.). Georgetown University Working Papers in Linguistics 11: 10-29.
- (1978). Idiomaticity as a language universal. In J. Greenberg, C. Ferguson, & E. Moravcsik (eds.). Universals of Human Language, Vol. 3. Stanford University Press. Pp. 401-448.
- Norrick, N. (1981). Semiotic Principles in Semantic Theory. Amsterdam: Benjamins.
- Oxford Dictionary of Current Idiomatic English. Vol 1 (1975): A. Cowie, & R. Mackin (eds.); Vol. 2 (1983): A. Cowie, R. Mackin, & I. McCaig (eds.). Oxford University Press.
- Powell, M.J. (1992). Semantic/pragmatic regularities in informal lexis: British speakers in spontaneous conversational settings. Text 12/1: 19-58.
- (Forthcoming). Semantic/pragmatic regularities in informal lexis: British speakers in spontaneous conversational settings. In R. Brend & R. Bailey (eds.). The Eighteenth LACUS Forum, 1991. Illinois: Linguistic Association of Canada and the United States.
- Rosch, E. (1977). Human categorization. In N. Warren (ed.). Studies in Cross-Cultural Psychology. London: Academic Press. Pp. 1-47.
- (1978). Principles of categorization. In E. Rosch & B. Lloyd (eds.). Cognition and Categorization. Hillsdale, N.J.: Lawrence Erlbaum Assoc. Pp. 27-48.
- Sullivan, W. (1980). Some logical consequences of Makkai's "Idiomaticity as a language universal." Rice University Studies 66/2: 143-154.
- Traugott, E. (1989). On the rise of epistemic meanings in English: An example of subjectification in semantic change. Language 65: 31-55.

Appendix A: Informally marked verbal/pred. phrasal idioms: Type inventory from 16 informal settings (London-Lund corpus).

Function is determined in context.

Category 1: Informal and directly evaluative

beg for the moon	let their back hair down
bum around	let your hair still
catch me on the hop	further down
cover up	muck in/up
dig a deeper pit	pack it all in
dish up	pay lipservice to the
dry up	Gods
fall for	play his cards carefully
fit in better with	poke fun at
fold up	prepare to meet my maker
float in/out/around	pull it off
get a word in edgewise	pull their socks off
get bogged down	put your foot in
get off the ground	serve it up
go down well	sort things out
go one better	spin it out
grow up	stir the place up
hang on	take everything in her
?have a big thing going	stride
have eyes for	take the wind out of my
hit it off	sails
knuckle under	watch its P's and Q's
lark about	

Category 2: Informal and either directly or indirectly evaluative

This category is empty. But it is needed for categorizing informally marked words (i.e. as opposed to idioms).

Category 3: Informal, evaluative, intense

be off like a shot	nip on the head with a heavy
burn himself out	hammer forcibly
come out of my ears	pin you to the wall
come to the crunch	rub it in
dash off	scrape the (bottom of...)
do a Wrenne on them...make	barrel
them sweat	smoke like a chimney
fed up	flock in
finish me off	?haven't the first clue
get stuck	shove me up
lumbered with	thrash out

Category 4: Informal, intense

bash on/out
 blow in
 bounce back
 bump into
 career off

hive off
 jam up
 lead by the nose
 thrash out
 whip out/up

Category 5: Informal, intense, expressive, evaluative

*have a hope in hell	kick you in the bollocks	put the fear of God into
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Category 6: Informal, evaluative, expressive

get a bee in his bonnet make me sick quiver in my shoes

Category 7: Informal, vague

get (them) muddled up

Category 8: Informal, vague, evaluative

knock on a bit go the whole hog

Category 9: Miscellaneous

cast an eye on
 cotton on to
 clutter up
 crop up
 draw a halt
 float around
 get wind of
 ?have another go
 leave off
 mess around
 peter out

pick up ("learn")
 pull your wits together
 put you in the picture
 put yourself in a spot
 roll around
 spread their wings out
 stick to
 stump up
 tail off
 toss up (for it)
 wind up

Appendix B: Formally marked verbal idioms from the Oxford Dictionary of Current Idiomatic English.

Vol. 1: From first 99 of 367 pp.

abscond from	auger ill/well for	depart from
abscond (with)	avail (against)	derive from 1,2
absent oneself	avail oneself of	destine for
absolve from	avenge o'self (on)(for)	deter (from)
abut on	avert (from)	detract from
accede to	awake(n) to	devolve upon
accord with	bear down	digress from
acquaint with	bear witness to	direct to
acquiescence in	borne in on	direct one's/sb's
address oneself to	bring forth	attention to
adhere to 1, 2	burn for	direct to/towards
admit of	burn with	disabuse of
admit to	call down on sb's head	disapprove (of)
adorn with	call forth	discharge (from)
alienate from	cast in o's lot with	discriminate btwn.
allow of	charge with	disengage (from)
allude to	come forth	disinclined (for)
animadvert on/upon	compute at	dispossess of
append to	concede to	dissociate from
appertain to	conceive of	dissuade from
appraise of	concur (with)	diverge from
appropriate (for)	condole (with/on)	divest of
appropriate (to)	conduce to	doubt of
approximate to	confer (with)	elevate to
argue against	confirm in	emanate from
arise from	consecrate to	embroiled in
arm (oneself) against	consign to	emerge from
arouse (from)	consist in	enamoured of
ascribe to	consort with	encroach upon
aspire to	contract (with)	encumbered with
assail with	converse (with)	engrossed in
assent to	course through	enlightened about
assign to	cull from	enmeshed in
assimilate into\with	culminate in	enshrined in
associate with 1,2	deceived in	ensnared (in)
assure of	dedicate to	enter upon
atone for	deduce (from)	entrap into
attach 2,3	defer (to)	estranged from
attain to	delegate (to)	exact from
attend on/upon 1,2	delete (from)	expunge from
attire oneself	deliver oneself of	extort from
attribute to 1,2	delude (into)	exult in
attune to	denude (of)	exult over

Vol. 2: From first 213 of 606 pp.

be the case that	bid fair to do
beggar all description	break one's fast

BLENDS IN HUMOROUS LANGUAGE
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In his book Word Formation in Generative Grammar, Aronoff (1985:20) characterizes blends as "oddities" which are "opaque, and hence uncommon" because they "have no recognizable internal structure or constituents." However, even Aronoff's own theory allows for composition and truncation, which produce blends. Compounds are not discussed in the book, but their existence is explicitly admitted (Aronoff 1985:xi). And although truncation is defined as deletion within a word (Aronoff 1985:88), deletion can also occur at the end or at the beginning of a word. Since blends can often be analyzed as the result of composition followed by modified truncation at the end of the first word and the beginning of the second word, blending can be defined as two simple ordered transformations. Composition occurs first; and deletion needs to be modified for compounds that do not delete from both components. Since traditional definitions of the blending process are rather free, it is not difficult to find examples of blends. Bloomfield sees Late Latin grevis (cf. Old French grief and Italian greve) as a blend of Classical Latin gravis 'heavy' and levis 'light', and he also proposes syntactic blends, such as I am friends with him from I am friendly with him and we are friends. (Bloomfield 1933:422-3). And Hockett (1987:71) stresses the allusive function of new blends with the claim that the effect of a recent blend like Reaganomics depends on recognition of both Reagan and economics, but eventually such compounds are accepted like other words and are no longer analyzed by speakers.

However, even more important than the theoretical argument is the empirical fact that languages do indeed have blends. I could base my arguments on examples from a polysynthetic language like Greenlandic, which regularly forms word-sentences from morphemes. Or I could build my case with examples from a tonal language like Ewe, where morphemes so often combine that Rongier (1988:206) has suggested that Ewe may not have a finite number of words, since new compounds are constantly created. But I will use data from French, a language that is structurally similar to English, which is the language of choice for Aronoff and other linguists of the same theoretical school.

The first point to make is that blends have arisen

varieties of the language. A standard etymological dictionary like Dauzat (1964) has words that, like the following, derived from blending:

1. abasourdir 1632 'to dumbfound' < assourdir 'to deafen' X basourdir 'to kill'
2. aéroport 1928 'airport' < aéroplane 'airplane' X port 'port'
3. amerrir 1910 'to land on water' < mer 'sea' X atterrir 'to land'
4. bancocrate 1852 'bancocrat' < banque 'bank' X aristocrate 'aristocrat'

Like most neologisms, these words are nouns or verbs, and they describe new items or activities that were not spoken about in the same way before the dates of first attestation. In these blends, part of one word is deleted, as shown in parentheses, while the other word remains intact:

5. abasourdir < a(ssourdir) X basourdir
6. aéroport < aéro(plane) X port
7. amerrir < mer X a(tterr)ir
8. bancocrate < banque X (aristo)crate

Since the dates of first attestation show that the blends entered the language at different times, the process of blending has an historical depth which suggests that blends are not oddities.

Furthermore, blending occurs in different geographical areas. For instance, a recent dictionary of African French has examples of blends like the following (Blondé 1988):

9. Abidjanaise f. 'national anthem of the Ivory Coast' < Abidjan X Marseillaise
10. ananeraie f. 'large pineapple plantation' < ananas 'pineapple' X bananeraie 'banana plantation'
11. Belgicain m. 'Belgian from Europe, in contrast to a Belgian from Zaïre' < Belgique 'Belgian' X américain 'American'

12. béninisation, bénisation f. 'Beninisation' < Bénin 'Benin' X africanisation 'Africanization'

All of the preceding examples are nouns, and this is not surprising, because most neologisms are nouns. In this sample of data, most of the nouns are feminine because they end in the feminine suffixes -aise, -aie, and -tion. As in the examples from the French etymological dictionary, there is some variation in the deletion or truncation rule, as we can see by the deleted material in parentheses:

13. Abidjanaise < Abidjan X (Marseill)aise
14. ananeraie < anan(as) X (banan)eraie
15. Belgicain < Belg(ique) X (amér)icain
16. béninisation < Bénin X (african)isation
17. bénisation < Bén(in) X (african)isation

One of the blends even has two variant forms, béninisa-

tion and bénisation. There are often phonetic points of similarity between the two words combined in blends, as in the secondary accent on the first syllables of Abidjan and Marseillaise, the nasals in ananas and bananeraie, and the affix [ik] in Belgique and américain. In many blends, the two words are joined at the point of phonetic similarity.

From the historical and geographical distribution of blends, and from the syntactic and phonological features of blending, it appears that blends are not oddities. This argument is strengthened when we look at the formation of blends in context. I have chosen to examine humorous language, because the speaker is freer to create new words in a comic register. My source is the satirical weekly newspaper Le Canard enchaîné, a Parisian political publication. In a discussion of the desert-like conditions of a drought, an article in the December 4, 1991 issue says:

18. Ainsi parlait Saharathoustra 'Thus spoke Saharathoustra'

The neologism Saharathoustra is a blend of Sahara and Zarathoustra 'Zarathoustra'. The same issue speaks of le mécontemporain 'the discontemporary one'. The blend mécontemporain is derived by combining mécontent 'discontented' and contemporain 'contemporary'. Since headlines use telegraphic speech, it is not strange that headlines use blends, which are a contracted form of compound noun. The headline Fafactures in the July 8, 1992 Canard enchaîné is explained by the following:

19. "On a rêvé, en pensant que la loi d'amnistie allait tirer un trait sur les affaires de fausses factures," a dit récemment Laurent Fabius... "People dreamed in thinking that amnesty would cancel out the business of false receipts," said Laurent Fabius recently...'

The word fafactures is a blend of the proper name Fabius and factures 'receipts'. This analysis finds confirmation in the fact that Fafa is the nickname of Fabius in the Canard enchaîné. Another article in the same issue is headlined Pasquajevo, which is derived from Pasqua and Sarajevo, as we can see from the following report:

20. Seul Pasqua a détonné en remarquant, avec un rien d'amertume: "C'était à Giscard et à Chirac d'aller à Sarajevo!"... 'Only Pasqua interjected a sour note by remarking with a certain bitterness, "Giscard and Chirac should have gone to Sarajevo!"...'

Many examples in this paragraph show that blends can be made from both proper and common nouns.

Journalists are not the only writers to invent blends, since even literary authors like the poet Jacques Prévert have coined such words. Writing of a

radio announcer, Prévert (1992:88) refers to:

21. cette voix hidéaliste 'that hideous, idealistic voice'

The adjective hidéaliste is a blend of hideuse 'hideous' and idéaliste 'idealistic'. He also makes an adverb from Fantomas, the hero of an old French movie serial (Prévert 1992:200):

22. retrospectivement et fantomatiquement 'retrospectively and automatically like Fantomas'

In the adverbial phrase, the poet has created a blend of Fantomas and automatiquement 'automatically'. The poet often uses a blend in a mocking vein, as when he pokes fun at an alcoholic military officer (Prévert 1992:344):

23. Un alcoolonel d'infanterie... 'An alcoholic infantry colonel...'

This example blends alcoolique 'alcoholic' with colonel 'colonel'. Sometimes the poet gives the parts of a blend in same context as the new word (Prévert 1992:686):

24. vendredi ou dimanche/vendremanche 'Friday or Sunday/Friunday'

The blend vendremanche 'Friunday' has been coined from the preceding day names vendredi 'Friday' and dimanche 'Sunday'.

It has not been difficult to collect blends from different sources. Therefore, since blending indeed occurs in a variety of contexts, we must conclude that blends are not oddities. Finally, in addition to the empirical evidence for blending, there is also the theoretical argument that blends are formed by composition and deletion, rules which are found elsewhere in the language.

REFERENCES

- Aronoff, Mark. 1985 [1976]. *Word Formation in a Generative Grammar*. Cambridge MA: MIT Press.
- Blondé, J., G. Canu, J.-P. Caprile, J. R. Deltel, P. Dumont, R. Efoua-Zengue, S. Faïk, D. Gontier, F. Jouannet, S. Lafage, G. Mendo Ze, G. N'diaye-Corréard, A. Queffelec, C. Queffelec, D. Racelle-Latin, J.-R. Rondreux, J. Schmidt, S. Shyirambere and J. Tabi-Manga. 1988 [1983]. *Inventaire des particularités lexicales du français en Afrique noire*. Paris: EDICEF.
- Bloomfield, Leonard. 1961 [1933]. *Language*. New York: Holt, Rinehart and Winston.
- Le Canard enchaîné. 1991. Paris, No. 3710, December 4, 1991.
- Le Canard enchaîné. 1992. Paris, No. 3741, July 8, 1992.

- Dauzat, Albert, Jean Dubois and Henri Mitterand. 1968 [1964]. Nouveau dictionnaire étymologique et historique. Paris: Larousse.
- Hockett, Charles F. 1987. Refurbishing our Foundations: Elementary Linguistics from an Advanced Point of View. Amsterdam: John Benjamins Publishing Company.
- Prévert, Jacques. 1992. Oeuvres complètes, I, ed. Danièle Gasiglia-Laster et Arnaud Laster. Paris: Editions Gallimard.
- Rongier, Jacques. 1988. Apprenons l'éwé: miasr⁵ evegbe, volume I. Paris: Editions l'Harmattan.

AFRICAN-AMERICAN CONTRIBUTIONS TO AMERICAN SLANG

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In my 1991 LACUS Forum presentation, I showed that American college slang has borrowed few terms from foreign languages. This lack of foreign vocabulary is consistent with the purpose of slang, for groups that cultivate slang are directed inward, not outward, and are more interested in maintaining a line of demarcation between themselves and others than in going beyond themselves to embrace the experiences of others. Borrowing a few trendy vocabulary items from other languages--like faux 'to make a mistake' or chica 'girl' in student slang--does not affect the sociolinguistic distinctions within a speech community. Dialect borrowing, however, is a different matter. In dialect borrowing, speakers share the same language, and the borrowing process implies negotiation of the status of the groups doing the borrowing and lending. The ordinary pattern is that the variety of lower prestige borrows from the variety of higher prestige. Thus speakers of Southern varieties of American English modify their pronunciation to distinguish the vowels of cents and since and forsake regional uses like dash the button and paper poke in favor of press the button and paper bag. Dialect borrowing in slang, however, reverses the pattern. Slang often acquires words and expressions from the dialects of groups on the margins of society, like jazz musicians, carnival workers, gamblers, prisoners, and ethnic groups. The two ethnic groups that have most influenced general American slang are Yiddish speakers and African-Americans. According to Robert L. Chapman, editor of the New Dictionary of American Slang, "close analysis would probably show that, what with the prominence of black people in the armed forces, in the entertainment world, and in street and ghetto life, the black influence on American slang has been more pervasive in recent times than that of any other ethnic group in history." (xi) This paper is one step in the analysis of African-American contributions to American slang.

The adoption of African-American linguistic forms by speakers outside of African-American speech communities is a complex instance of dialect borrowing. The factors that shaped African-American dialects of

English are themselves complex. Only in Sea Island Creole do words of African origin survive in any numbers. Other varieties of American English retain only a few African words, like goober, gumbo, and okra. Nevertheless vestiges of African culture and behavior have been transmitted through the generations via the words of a foreign language that became at once the lingua franca and the mother tongue of African-Americans, English. Thus English words like cap, grip, rap, signify, and shuck have been appropriated by speakers of African ancestry to describe a range of verbal techniques that survived the Atlantic crossing and have been preserved over the generations.

The New Dictionary of American Slang of 1986 includes among its seventeen thousand entries about five hundred that are associated with African-Americans (designated in the dictionary as black). Of these, about sixty are ethnic slurs or are outsiders' perceptions of African-American culture and are unlikely to have been originated by African-American speakers, for example, porch monkey or Hershey bar for 'an African-American'; African golf for 'the game of craps'; and Ethiopian heaven for 'topmost balcony in a segregated theater'. The remaining 435 or so are African-American in origin or use, or both, and can be analyzed from various perspectives to give a picture of African-American contributions to American slang.

Etymologically, only six have definite or plausible origins in African languages: buckra 'white man'; jive 'banter'; juke 'dance'; jumbo 'huge'; mojo 'amulet, power'; and swank 'well-dressed'. As is true with slang in general, the overwhelming majority of African-American slang terms have originated in the ordinary ways by which English generates new vocabulary. For example, compounding is shown by crumbsnatcher 'baby' and walkboy 'good male friend'. Burner 'one who performs (burns) well' and funkiness and funkified (from funky) are formed by suffixation. Do and tude are shortenings of hairdo and attitude. Rhyming is operative in honky-tonk and boon-coon 'best friend'. Eyeball 'to look at' and off 'to kill' are verbs formed by functional shift from another part of speech. Semantic shifts of various types and degrees account for large numbers of African-American slang items. Bottoms 'shoes'; chimney 'the head'; and skin 'palm of the hand' are metonyms. Metaphors include forks 'fingers'; lemon 'light-skinned black woman'; and piano 'section of spare ribs'.

Because ephemerality is often a characteristic of slang, dates associated with entries are also worth noting. Over twenty percent of the African-American entries carry a dating phrase that shows "the time of

origin and/or special currency of the terms." (xxxiv) These are listed in the appendix. Many from more than fifty years ago are still in use in informal varieties of American English, sometimes with a slightly different meaning, for example, uppity, white trash, truck, Joe Blow, reefer, and latch on to. The two decades with the greatest number of entries are the 1930's, the golden age of radio and nightclubs when black entertainers began achieving national prominence, and the 1960's, the decade of the struggles to end legal segregation. Almost all of the terms from the 1960's are still in general informal use, though many speakers may no longer be aware of their African-American origins. Several of the terms are synonyms. Of bad, mean, serious, and righteous for 'excellent', only righteous marks its user as a throw-back to an earlier era. Slide, truck, and split all mean 'to leave', and all can still be recognized and used, although they are not as with-it as bolt and dust. Because fewer than one-fourth of the items are dated and because the dating of slang items is fraught with imprecision, these data can be only suggestive.

Another uncertainty in using dictionary entries as data is tracking the progression of use of a term, particularly in slang. Some terms originate within one group but by use become identified with another. The Hound and The Dog for 'Greyhound bus' are associated with African-Americans and students, though they originated among truckers. In student slang at the University of North Carolina, case nickel and case quarter, for 'a single coin worth five cents' and 'a single coin worth twenty-five cents', were popularized by African-American students and thus on campus are considered black slang. Yet older and rural North Carolinians of both races use the term. Uncle Tom for 'a black who is overly subservient' is widely known to be from the title character of Harriet Beecher Stowe's novel, but its shortened form tom, particularly when it functions as a verb, is marked as black usage. Many terms that originated among African-Americans remain for the most part in that community, like conk 'to straighten hair'; have papers on 'to be married to'; and Up-South 'the North'. Others move into general American slang and informal usage, retaining various degrees of association with African-American speakers, for example, uptight 'nervous'; chill out 'relax'; and tude 'a negative attitude'. And when an expression like crunch time bursts into popularity with no associations with African-Americans in the 1980's, should it be linked to an outdated black slang etymon, here crunch meaning 'crisis', and categorized as an African-American contribution to the language?

Another characteristic of the African-American dictionary entries is that fifteen percent are accompanied by "impact symbols" marking them as offensive. (xxxiii) That so many slang terms are objectionable in public and polite usage is consistent with slang's irreverent nature. Slang is where the language can name what is distasteful to speak about. Two important taboo areas in American culture are sex and race. A glance at the sixty-four items with impact labels shows that almost all refer to sex or race, for example lay pipe 'copulate'; poontang 'black woman regarded as a sex object'; and peckerwood 'a poor Southern white'. Marginalized groups have less to lose in violating the taboos of society, and it is not surprising that general slang reaches into the vocabulary of these groups for offensive words. The availability of offensive vocabulary in the dialects of marginal groups confirms the entrenched position of the mainstream, which stereotypically pictures such groups as preoccupied with unrestrained behavior like sexual promiscuity, drinking, dancing, and having a good time.

Perhaps the most instructive way of examining this corpus of African-American slang is by subject matter. From this perspective, African-American is not a version of general slang in miniature. The meanings are far more limited.

Most striking is the lack of terms for drinking and drunk. There are only seven in 435: conk-buster, ink, King Kong, and kong all refer to cheap varieties of wine and liquor; taste means 'a drink of liquor'; and ripped and teed up mean 'drunk'. Similarly, only three terms mean 'marijuana', gage, reefer, and tea; and floating is 'a drug-induced high'. But there are no terms for cocaine, heroine, or hallucinogens. Violence is not prominent either. Five terms mean 'kill': chill, kiss-off, off, vamp, and waste. A single term, bill, means 'knife', and popper means 'gun'. Nevertheless, there are eight terms for 'policeman', including bluebird, Irvin, and skull-buster.

More than three-fourths of the 435 terms fall into a handful of broad and sometimes overlapping categories. The area of interpersonal relationships includes gatemouth 'a person who knows and tells everyone else's business'; homeboy 'a person from someone's hometown or a friend'; run a game on someone 'to take advantage of someone, particularly by deception'; and walk soft 'to behave quietly and peacefully'. Matters of sex and women include forty-three terms, for example flavor 'a sexually attractive woman'; george 'to invite to sexual activity'; and ground rations 'copulation'. Another forty-five refer

to personal appearance, including skin color, for example do-rag 'a scarf worn over a processed hairdo'; headlight 'a light-skinned black person'; and righteous moss 'non-kinky hair'. A slightly smaller set encompasses music, dancing, having a good time, and performing well. For example, rug-cut means 'to dance at a rent party or other cheap occasion'; an all-originals scene is 'a party where only blacks are present'; and tcb (take care of business) means 'to perform stylishly and effectively'. Over twenty terms are negative or positive evaluations. Lame means 'an old-fashioned conventional person', and L7 is the graphic representation of a square. Toast means 'excellent', and stone means 'thorough, perfect'. About seventy items refer to whites or African-Americans or the relationship between them. A marshmallow is a 'white'; a bleed is a 'fellow black'; and feel a draft means 'to sense racial prejudice'.

Taken as a group, the image conveyed by the 435 words associated with African-Americans in slang is a pleasant one: blacks like to get all dressed up and to get together having a good time dancing and laughing and greeting each other. On the surface the vocabulary items seem to depict a group of lower status as appealing and worthy of imitation. Yet a closer look shows that the borrowings from African-American vernaculars are fairly cautious and are filtered by the stereotypes held by mainstream society, thus helping to reinforce the normative function of slang.

REFERENCE

Chapman, Robert L. New Dictionary of American Slang. New York: Harper & Row, 1986.

APPENDIX

AFRICAN-AMERICAN SLANG

DATED ENTRIES IN CHAPMAN'S
NEW DICTIONARY OF AMERICAN SLANGI Outdated

	(Abbreviated gloss)
barbecue	sexy woman
bill	knife
blowing cat	jazz musician
buckra	white man
cackle-broad	wealthy woman
crunch	crisis
crutch	car
kack	a refined person
skillet	a black person

II Before 1900

auntie	any elderly black woman
honky-tonk	disreputable saloon
jam	vulva
jelly-roll	vulva
mack	pimp
slide	to depart
uppity	arrogant
white trash	low class Southern whites

III Early 1900's

blow	to play a musical instrument
boogie	syphilis
boogie-woogie	syphilis
fly	attractive, stylish
get on someone's case	to annoy, criticize
jazz	a kind of music originating among Southern blacks
jive	to banter
juke	pertaining to activities at roadside bars
kelt, keltch	a white person
mean	excellent
play the dozens	to play a game of verbal insults
truck	to leave

IV 1920's

bird's-eye maple

gator

Joe Blow

monkey chaser

reefer

skag

tea

teed up

light-skinned black

female

devotee of swing and jive
any man

a West Indian

marijuana cigarette

unattractive woman

marijuana

drunk

V 1930's

alligator

balling

chincy

crumbcrusher

fall up

frog up

fuzz

gasser

grits

jam

jeff

latch on to

natural born

rent party

righteous

side

skate

skull-buster

devotee of swing and jive
fun

stingy, mean

baby, small child

to arrive

to become confused

police officer

anything amusing

food

to have a good time

a white person

to obtain, attach

total, innate

party to help pay the
rent

excellent

phonograph record

to avoid paying a debt

police officer

VI 1940's

chewed

chill

fly chick

forks

fox, foxy

hacked

kiss-off

moss

serious

zoom

defeated

to kill

up to date young woman

fingers

sexy woman, desirable

annoyed

to die

hair

excellent

to get something without
payingVII World War II

jody

civilian

VIII 1950's

bad	excellent
doo-wop	a style of jazz singing
funk, funky	a style of urban black music; in style of funk
split	to depart
split the scene	to depart
take care of business	to perform stylishly and effectively
yea	to this extent

IX 1960's

bad scene	something unpleasant
blood brother	fellow black
bug	to pester
do one's own thing	to follow one's own inclination
lay a trip on someone	to burden someone with something
lay something on someone	to tell, inform
let it all hang out	to be free and unrestrained
the nitty gritty	harsh reality
off	to kill, destroy
oreo	white-identified black
rap	to converse
right on	exclamation of approval
ripcoff	theft, swindle
rip off	to steal, swindle
scene	milieu
tell it like it is	to tell the truth
together	composed and effective
uptight	tense, nervous

X 1970's

funkified	in an urban black musical style
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XI 1980's

break	to do break dancing
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PHONOLOGY

PHONOLOGICAL SYLLABLES IN *ARMES PRYDEIN*

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Defining the Syllable

The syllable is one of those linguistic concepts that everyone knows informally, at least to some degree. For example, in a word such as *attuning*, we know that there are three syllables, although we may not be sure just where precisely one ends and the next begins.

Linguists have come up with many definitions of the syllable based upon particular approaches (several can be found, for example, in Bell and Hooper 1978; compare also Goldsmith 1990). These definitions, though, still rely upon a preconceived division of the word into a particular number of syllables. That is, the linguist still approaches a word such as *attuning* in the same way as does the nonlinguist — assuming there to be three syllables and then figuring out which consonants (or parts of consonants) go with which vowels.

Determining which consonants belong with which vowels is sometimes problematic and has led to extensive debates in the profession. For example, the syllable division in specific instances in German has been subject to a particularly long controversy because of discrepancies in the way the dorsal fricative should be pronounced in one syllable as opposed to another — palatal [ç] in syllables with front vowels, velar [x] in syllables with back vowels. This dispute began with Bloomfield 1930 and has continued in numerous articles and books as summarized in Griffen 1977 (also 1985:chapter 3).

In his contribution to the German debate, Dietrich (1953) offered a solution with two different syllable structures — one phonetic (that is, in actual pronunciation) and one phonological (that is, in the way it is perceived in determining meaning). In the analysis of Modern Welsh (see Griffen 1979), instances have also been found in which syllables operate one way phonetically and another phonologically — sometimes the loss of a vowel alters the syllable-based accent pattern (phonological), and sometimes it does not (phonetic).

Indeed, Welsh provides us with several apparent discrepancies between phonetic syllable structures and phonological syllable structures. Viewed through the traditional segmental/phonemic approach and even through the more modern nonlinear and CV approaches, these discrepancies call to question our most basic knowledge of the syllable — how many syllables there are in a given word.

Phonetic/Phonological Syllable Discrepancies in Welsh

Last year the "mesotomic syllable" was introduced to this Forum. Occurring regularly in *Armes Prydein* ('The Prophecy of Britain' — see I. Williams 1972) and other Old Welsh poetry (compare I. Williams 1968), the mesotomic syllable (the syllable 'cut through the middle') consists of a single vowel in what appears to be two syllables preceding the pitch-accented ultima. Although the device would seem to be two syllables from the standpoint of its array of consonants and vowels, it counts as only one in scansion.

For example, line 2 of *Armes Prydein* is *maraned a meued a hed genhyn* 'we shall have wealth and property and peace' (I. Williams 1972:2 & 3 — translation by Rachel Bromwich in text). The word *maraned* [maraned] 'wealth, treasure' apparently maintains two sequential identical vowels in pretonic position and counts in the scansion as a single syllable. Thus, the line adheres to the appropriate Cyhydedd Naw Ban meter with five syllables in the first half-line and four in the second (see Morris Jones 1925:337-38, I. Williams 1972:lii). It would appear, then, that two syllables are produced phonetically but only one is perceived phonologically.

Another apparent production/perception, phonetic/phonological discrepancy is found in epenthesis (see especially Griffen in press). The epenthetic vowel is represented orthographically in Old and Middle Welsh and survives in Modern Welsh with the same rules of scansion (but it is not usually represented in the orthography any more). In epenthesis, a vowel is apparently added to create a new syllable to facilitate pronunciation, but it is not perceived as a syllable and is not scanned. For example, OW *kadyr* [kað-ɪr] 'fine, brave' is pronounced in two syllables; but the second vowel is only epenthetic, so the word is scanned (that is, it is perceived) as monosyllabic. Thus, the name *Katwaladyr* [kadwalad-ɪr] is scanned as disyllabic, with the syllable division *katwa* (mesotomic) + *ladyr* (epenthetic), however it may be pronounced.

This syllabic discrepancy in *Armes Prydein* and in other works all the way into Modern Welsh is further exacerbated by a confusion between syllables and clusters. One of the areas of this rather extensive confusion is found in the initial orthographic sequence *gwr-*, which traditionally in the literary register is a consonant cluster [gr^w]. For instance, line 75 of *Armes Prydein* is *dyhed y eu gwaged a dywedant* 'They will tell the disastrous tale to their wives' (I. Williams 1972:6 & 7). While *gwaged* 'wives' may appear to be three syllables with the initial syllable containing what would otherwise be the vowel *w* [u], the word is actually disyllabic. The confusion comes from the necessity of representing the labialization of the [gr] cluster in orthographic sequence and the explicit maintenance of the word's etymological origin in the root *gwr* [gur] 'man'.

However, it is evident from errors that the poet did not pronounce the *gwr-* as a cluster, but rather as a syllable [gur]. Thus, line 41 of *Armes Prydein* is *Gwrthottit trindawt dynawt a bwyller* 'let the Trinity ward off the blow that

is intended!' (I. Williams 1972:4 & 5 — compare the name *Gwrtheyrn* 'Vortigern' in lines 27 and 137 with the glide and the same following consonant). In the previous example and others, the sequence *gwr-* must be pronounced as a cluster to maintain the proper Cyhydedd Naw Ban meter; but in this and other examples, it must be pronounced as a syllable.

That the confusions arise from errors by the poet himself can be seen in the fact that even the word *gwr* [gur] 'man' is hypercorrected to a nonsyllabic cluster. Line 23 has the lenited (soft mutation) form of the word in *yssyd wr dylyedawc a lefeir hyn* 'He is a noble man who says this' (I. Williams 1972:2 & 3). The pattern of errors involving this and other such clusters both word-initially and word-finally indicates that the poet did in fact pronounce these orthographic sequences as syllables (as many still do today) yet felt compelled to count them as clusters in keeping with the established literary register (again, as many still do today).

These apparent discrepancies between the phonetic production and the phonological perception recall yet another set of phenomena in Modern Welsh — the phonetic versus the phonological stress distribution patterns referred to above (see Griffen 1979). While pitch accent rises throughout the word and culminates in the final syllable, the stress accent follows a phonological /2 3 1 2/ pattern (with 1 heavy, 2 medial, and 3 light). Certain changes in the structure of the word, however, either cause the stress pattern to be changed as well or require it to remain unchanged.

In the "contract syllable," the penult and the ultima historically merge, but the stress pattern is not redistributed. Thus, the ultima takes both the high pitch accent and the heavy stress accent. For example, the word *Cymraeg* 'Welsh' was trisyllabic in Middle Welsh *Cymraëg* [kəm ra: eg], with the *-eg* adjectivizing suffix pronounced separately. In Modern Welsh, however, the sequence of vowels has motivated a merger of the final two syllables [kəm ra:ɨg], resulting in an irregular /3 1/ stress pattern.

On the other hand, epenthesis requires a redistribution of the stress pattern. For instance, the word *gogr* 'seive' is usually pronounced disyllabically as [go:gor] (or [go:g-r]). Unlike the contract syllable, epenthesis requires that the stress pattern be reapplied to the phonetic realization in the /1 2/ sequence.

The difference between the contract syllable and the epenthetic fits into the pattern of discrepancy between the phonologically perceived syllable and the phonetically produced syllable. Indeed, this new discrepancy makes it clear that separate phonetic and phonological syllable structures must be maintained. Nor are these separate structures just a momentary device to explain some historical residue in Modern Welsh. As seen above, patterns of discrepancy have persisted in various forms for at least a millenium.

While we can certainly describe these phenomena in our notational systems (using, for example, interstratal discrepancies — compare Lockwood 1972:27-29), their implications for phonology ought not to be relegated to mere notational arguments. These phenomena call to question the funda-

mental difference between phonetic production and phonological perception. Indeed, they throw doubt upon our most basic knowledge of the syllable.

The Dynamic Solution

As has often been the case, the apparent discrepancy between the number of syllables produced (phonetically) and the number of syllables perceived (phonologically) actually derives not so much from the facts as from the analyst's perception of the facts. The traditional approach — supported by both segmental phonemics (compare Haugen 1956) and the recent nonlinear and CV phonologies (compare Goldsmith 1990, Fudge 1987) — maintains the syllable as a collection of consonants and vowels. In the dynamic approach, on the other hand, the syllable is the unit of the syllable division, and it is defined solely in terms of a steady-state vocalic approximation (Griffen 1985:36-38).

From *Armes Prydein* all the way into Modern Welsh, the evidence strongly supports this dynamic interpretation. The mesotomic syllable is perceived by the analyst as consisting of two syllables simply because the vowel is "split" by a consonant. The fact that it counts (that is, it is perceived by the speaker) as one long syllable is evidence enough though, that the speaker views the syllable not in terms of CV sequences, but of steady-state vocalic approximations — however the analyst may view it.

Likewise, the epenthetic vowel is seen as an extension of the "nuclear" vowel. To the speaker (if not to the linguist) it is not a separate syllable in spite of the intervening consonant. In effect, epenthesis and mesotomy are two sides of the same coin, with epenthesis comparable to a process for creating a long interrupted vowel to aid in pronunciation and mesotomy as just such a state or arrangement.

The fact that Modern Welsh epenthesis "redistributes" the stress accent has not so much to do with the speaker's application of accent as with the analyst's interpretation of it. The primary accent in Welsh is not stress, but pitch (compare B.J. Williams 1989), which rises throughout the word culminating not necessarily on the final *syllable* (as linguists know it through CV sequencing), but at the end of the word. The final syllable must *end* in the high pitch accent, but a long syllable may *begin* with lower pitch and with the ancillary accent of heavy stress — particularly in those cases of historical change discussed here. Seen in this dynamic light, the accent pattern involving a contract syllable as in *Cymraeg* and one involving epenthesis as in *gog[o]r* are the same. The segmental/nonlinear/CV phonologist simply analyzes the former as containing a single long diphthong and the later as consisting of two syllables with an intervening consonant.

The (hyper-)correction of [gura:iɡ] to [gr^wa:iɡ] that occurs in Welsh dialects from Old Welsh to Modern is likewise evidence for the dynamic interpretation of the syllable. As seen in mistakes in scansion in *Armes Prydein*, the poet had to satisfy a discrepancy between his dialect that had lengthened

the glide to a steady-state vocalic approximation (a syllable) and those that had not — including the prestigious written register. The author of *Armes Prydein* thus recognized both the (to him) natural syllable (the vowel) and the literary cluster (the glide) but had difficulty in applying the latter consistently. It was, after all, a syllable for him. And for him, a syllable was a steady-state vocalic approximation — as it was, indeed, for the literary register with its glide instead of the vowel.

Thus, the understanding of the syllable that is gained from a dynamic analysis of the apparent discrepancy between the “phonetic syllable” and the “phonological syllable” is one that requires us to discard the traditional definition of the syllable as based upon CV sequencing once and for all. If we persist in analyzing the syllable on the basis of CV sequencing, the discrepancy can do nothing but persist as well.

If, on the other hand, we adopt a dynamic mode of analysis, then the discrepancy will no longer even exist, and the analysis will be consistent. More than simply being consistent, though, the dynamic approach to the syllable as a steady-state vocalic approximation provides us with a framework through which we can examine such syllabic phenomena as pitch and stress accent without adding extraneous complications due to consonantal obstructions. By freeing us from the demand that the sequencing of the consonants be taken into account, the dynamic syllable reveals a simple, straightforward accentuation pattern for Welsh, in place of the complications of multiple levels or tiers of syllabication.

Moreover, the dynamic approach to the syllable provides us with a more far-reaching consistence — a consistence between observation and analysis. The dynamic syllable is based not upon the preconceived segmentation of traditional phonology, but upon the findings of current experimental phonetic analysis, which recognizes the dynamic nature of phonetics. As such consistence is a hallmark of a scientific approach — traditionally the goal of linguistics — we cannot maintain our claim that linguistics is a science yet turn our backs on analytical models that both remove such inconsistencies and maintain the inherent, observable structure of the data.

REFERENCES

- Bell, Alan, and Joan B. Hooper (eds.). 1978. *Syllables and Segments*. Amsterdam: North Holland.
- Bloomfield, Leonard. 1930. "German [ç] and [x]," *Le Maître Phonétique* 30, 27-28.
- Dietrich, Gerhardt. 1953. "[ç] und [x] im Deutschen — ein Phonem oder zwei?" *Zeitschrift für Phonetik und allgemeine Sprachwissenschaft* 7, 28-37. [[ç] and [x] in German — One Phoneme or Two?]
- Fudge, Erik. "Branching Structure within the Syllable." *Journal of Linguistics* 23, 359-77.
- Goldsmith, John A. 1990. *Autosegmental and Metrical Phonology*. Oxford: Blackwell.
- Griffen, Toby D. 1977. "German [x]." *Lingua* 43, 375-90.
- Griffen, Toby D. 1979. "On Phonological Stress in Welsh," *Bulletin of the Board of Celtic Studies* 28, 106-112.
- Griffen, Toby D. 1985. *Aspects of Dynamic Phonology*. Amsterdam: Benjamins.
- Griffen, Toby D. 1991. "Mesotomy and Phonological Theory," paper presented to the Linguistic Association of Canada and the United States XVIII, Ann Arbor, Michigan, August 1991. [To appear in *The Eighteenth LACUS Forum*.]
- Griffen, Toby D. in press. "Epenthesis and the Old Welsh Accent Shift," *Studia Celtica*.
- Haugen, Einar. 1956. "The Syllable in Linguistic Description". *For Roman Jakobson*, ed. by M. Halle, H.G. Lunt, H. Maclean, and C.H. Van Schooneveld, 213-21. The Hague: Mouton.
- Lockwood, David G. 1972. *Introduction to Stratificational Linguistics*. New York: Harcourt Brace Jovanovich.
- Morris Jones, John. 1925. *Cerdd Dafod*. Oxford. [The Art of Poetry]
- Williams, Briony J. 1989. *Stress in Modern Welsh*. Bloomington: Indiana University Linguistics Club Publications.
- Williams, Ifor (ed.). 1968. *The Poems of Taliesin*. English ed. by J.E. Caerwyn Williams. Dublin: Dublin Institute for Advanced Studies.
- Williams, Ifor (ed.). 1972. *Armes Prydein: The Prophecy of Britain*. English ed. by Rachel Bromwich. Dublin: Dublin Institute for Advanced Studies.

TRANSLATION AND STYLISTICS

THE RIGHT SIDE AND THE WRONG SIDE OF THE TRACKS:

CATEGORIZATION AND METAPHORIC EXTENSION

IN FRENCH AND ENGLISH

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Translation is a process which is hindered by the lexicon of the two languages compared. Indeed, in translating, one reaches a point when lexemic equivalences are different or all together absent in the target language. Sememic, cultural and metaphoric equivalences must be discovered or created. This is generally due to the fact that the model of the world that has been built for ourselves in the linguistic community in which we evolve, has been carved along different lines (segmentation) from the one in the target language and culture, leading to different lexical categories and metaphoric extension of the categorization process.

As Whorf (1956) puts it: "We dissect nature along lines laid down by our native languages...the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds...and this means largely by the linguistic systems in our minds." This Whorf has named "linguistic relativity".

To find examples of such "linguistic relativity", many anthropological linguists have delved into languages of people with wide cultural differences. Such a telescopic investigation is not at all necessary. If you live in France, the mere crossing of the Channel will afford you a wealth of examples of "linguistic relativity" between French and English.

This paper will study a number of examples of divergent categorization and metaphoric extension between French and English. Such concepts as pluralization, comparison, superlativity, subjectivity and objectivity in the face of reality, characterization of people and things, colors, divergent metaphorisation processes, and metaphoric creations and cultural rewriting to compensate for cultural differences, will be considered for the role that they play in translation.

1.0 THE PLURAL CATEGORY IN FRENCH AND ENGLISH

If one takes a superficial look at the category of plural in French and English, it seems to coincide pretty closely. The morphological systems of both languages force us to indicate either singular or plural under certain conditions. However, a closer look at the situation shows many divergences within the same category.

1.1 ANIMAL WORDS

All animal words pluralize in French. It is not the case in English. Many animal words do not change their forms in the plural although they behave as a plural in a sentence. This creates ambiguities in translating from English into French. For example, according to the context, the sentence: I saw the sheep crossing the road, will be translated either *J'ai vu le mouton traverser la route* or *J'ai vu les moutons traverser la route*. Other examples are:

ENGLISH PLURAL CATEGORY	FRENCH PLURAL CATEGORY
elk	des élan
quail	des cailles
deer	des cerfs
swine	des porcs
buffalo	des bisons
salmon	des saumons
trout	des truites
fish	des poissons

But one says:

fishes	espèces de poissons
fruits	espèces de fruits

This plural in English contains the aspect of "specification" which must be realized lexemically in French by the expression "des espèces de".

1.2 REALITY SEGMENTED AS A MASS OF THINGS IN ENGLISH BUT AS JUXTAPOSED UNITS IN FRENCH

The following categories of French and English derive from a different perception of reality. In English it is perceived as an undecomposable whole, as a collectivity of things. In French, reality is seen as constituted of countable units, able of being singularized.

ENGLISH CATEGORY	FRENCH CATEGORY
hair	des cheveux
advice	des conseils

glass	des vitraux
hose	des bas
canned food	des conserves
applause	des applaudissements
homework	des devoirs
news	des nouvelles
poetry	des vers
evidence	des preuves
furniture	des meubles
outlook	des perspectives
information	des renseignements
waste	des déchets

To singularize many of the above examples, English must use periphrastic constructions of the type "a piece of". In most cases, French offers a monolexemic singular.

ENGLISH CATEGORY	FRENCH CATEGORY
a piece of advice	un conseil
a piece of news	une nouvelle
a piece of poetry	une poésie
a piece of evidence	une preuve
a piece of furniture	un meuble
a piece of information	un renseignement
a piece of hair	un cheveu

Other singular forming periphrastic constructions in English are:

a suit of armor	une armure
a bolt of lightning	un éclair
a round of ammunition	une cartouche

The suffix (-ing) often participates in the creation of collective plurals in English for which there exist no singular forming periphrastic constructions. Examples are:

ENGLISH CATEGORY	FRENCH CATEGORY
shopping	des achats
meddling	des manigances
fussing	des embarras
nagging	des chamaillies
itching	des démangeaisons
off-campus housing	des chambres en ville

1.3 REALITY SEGMENTED AS A MASS OF THINGS IN FRENCH BUT COUNTABLE IN ENGLISH

ENGLISH CATEGORY

FRENCH CATEGORY

to eat grapes
trousers
dishes
grounds
oats
headquarters
suds

manger du raisin
un pantalon
la vaisselle
le parc
l'avoine
le quartier général
la savonnée

2.0 THE PARTITIVE IN FRENCH

In its segmentation of reality, French has arrived at a category which traditional grammarians have named the "partitive". Its morphemic realizations show up in the portmanteau words "du" (de+le), "des" (de+les), and in the double forms "de la" and "de l'". In the negative these forms all become "de". English does not realize these morphemes either in the singular or the plural.

ENGLISH CATEGORY

FRENCH CATEGORY

DECLARATIVE SENTENCE

I want beer.
I take sugar.
I have children.
She wants money.

Je veux de la bière.
Je prends du sucre.
J'ai des enfants.
Elle veut de l'argent.

NEGATIVE SENTENCE

I don't want beer.
I don't take sugar.
I don't have children.
She doesn't want money.

Je ne veux pas de bière.
Je ne prends pas de sucre.
Je n'ai pas d'enfants.
Elle ne veut pas d'argent.

3.0 THE COMPARATIVE GRADE

French and English differ in the carving they make of reality in the comparison of objects or people. This divergent segmentation of reality, here again, will influence the categorization process of the languages concerned. When in the reality under observation, the two terms of the comparison are overtly expressed, French and English coincide in the way the comparative grade is categorized. Examples:

Paul is taller than John.
Paul est plus grand que Jean.

However, it happens that one of the elements of the comparison remains covert. In that case, English continues

to segment reality as in the case of overtly expressed elements of comparison, and uses the comparative grade as its category. French keeps the lexeme in its non-comparative form. Examples:

ENGLISH CATEGORY	FRENCH CATEGORY
the upper Rhine	le haut Rhin
the lower town	la basse ville
the Lesser Bear	la Petite Ourse
the weaker sex	le sexe faible
the major universities	les grandes universités
at better stores	dans les bons magasins
sooner or later	tôt ou tard
a shorter dictionary	un dictionnaire abrégé

3.1 THE SUPERLATIVE GRADE

English and French express the explicit superlative in the same fashion. Example:

He is the tallest. C'est le plus grand.

However, English uses the comparative grade instead of the superlative grade which is preferred by French, when only two entities are being compared for their excellence. Examples:

She is the richer of the two.
C'est la plus riche des deux.

She is the richest of the three.
C'est la plus riche des trois.

In the same vein we find:

ENGLISH CATEGORY COMPARATIVE	FRENCH CATEGORY SUPERLATIVE
the major portion	la plus grande partie
the upper servants	les principaux domestiques
the major road	la route prioritaire
the earlier antibiotics	les premiers antibiotiques
the more traditional view	la vision la plus classique

As in the case of the categorization of the comparative grade into a non-comparative form when it is only implicitly suggested, the English superlative grade enters in a non-superlative category in French, when it is only implicit in nature. Examples:

The best restaurant in town.
Restaurant de première qualité.

This dress makes you look best.
 Cette robe rehausse votre beauté.

4. SUBJECTIVITY IN THE FACE OF REALITY

In the face of reality, English tends to remain objective while French filters reality through the minds of its speakers before letting it become an expressed fact. Thus, French subjunctive may be called the mood of what is in our minds, our feelings, our doubts, our will, our obligations, before they are realized as a reality to be imposed on others. In other words, the French "get into the mood" before they say it, and that mood affects the categorization process.

FRENCH CATEGORY SUBJUNCTIVE MOOD

ENGLISH CATEGORY INDICATIVE OR INFINITIVE

Il souhaite que tu réussisses.	He wishes for you to succeed.
Elle a peur que vous soyez malade.	She is afraid you will be sick.
Nous doutons qu'il parte avant midi.	We doubt he will leave before noon.
Vous voulez que je choisisse la bonne voiture.	You want me to choose the right car.
Il faut qu'elle vous comprenne mieux.	She has to understand you better.

4.1 OBJECTIVITY IN THE FACE OF REALITY

Sometimes, French does remain more objective than English in the face of reality. This is exemplified in the category of the verbs which are known as "causative". Thus, having to boil water, a French speaker will say: Je fais bouillir de l'eau. An English speaker: I am boiling some water. In the French rendering of the action of "boiling water", is recognized explicitly by the use of the verb "faire", the participation of an outside force, of a secondary agent. The English speaker subjectively acts as the primary agent of the "boiling" of the water. Because of this divergent perspective on reality, a number of English verbs form a category which may be called "inherently causative". French will always require the help of another verb, "faire" in most cases, to render this category of English verbs.

Examples: I am cooking the meal.
 Je fais cuire le repas.

She shushed him.
 Elle l'a fait taire.

They charged us ten dollars.
On nous a fait payer dix dollars.

Don't hurry me.
Ne me fais pas me dépêcher.

5. CHARACTERIZATION OF PEOPLE AND THINGS

In characterizing people and things, both English and French make use of adjectives. These adjectives may express two relationships to the object or to the person characterized: a quality or a relation. This dichotomy exists in both languages. However, the lexical categorization process which ensues is asymmetrical.

FRENCH CATEGORY

ENGLISH CATEGORY

Q une voix musicale

Q a musical voice

R un instrument de musique

R a musical instrument

Q une chambre monacale

Q a monastic room

R un ordre monastique

R a monastic order

French does not allow the same adjective to express both quality and relation. English does.

6. METAPHORIC EXTENSION

Metaphoric extension can be seen as just a step further in the categorization process. As Bolinger (1975) puts it: "The something-like principle is a way of saying that each time we speak we metaphorize." And Valesio (1974) states; "Metaphor is not a figure of speech among others, but a basic grammatical category."

The following are examples of divergent metaphoric extension processes between French and English. The examples chosen will come from the concepts: color, to understand/comprendre, money/time metaphoric extension parallelism, and metaphoric equivalences to render cases of cultural lacunae.

6.1 COLOR, CONTEXTUAL COLLOCATIONS AND IDIOMS

The concept of color affords a good example of the abstraction of the categorization process, that is metaphoric extension.

In their eagerness to explain the divergent categorization processes in French and English solely on the different segmentation of reality, traditional stylisti-

cians (Vinay-Darbelnet, 1958), have seen in the fact that English translates by "brown" nuances of colors for which French has six different equivalences, a proof of colorblindness of a national magnitude in English speaking cultures. The mistake they made was to stop their investigation at the level of the concrete: segmentation and categorization.

If they had pursued their analysis a step further, that of metaphoric extension, they would have discovered that "brown" enters into a semantic field in English which in certain collocations does not refer to objects "brown" in color, but to "types" of objects. In other words, the idiomatization process was disregarded in their analysis. The babel of translations which they depict for "brown" in French, has nothing to do with that color opposed to other colors like green, black, blue... Thus,

ENGLISH CATEGORY	FRENCH CATEGORY
brown butter	du beurre roux
brown pencil	un crayon bistre
brown shoes	des chaussures jaunes
brown bread	du pain bis
brown paper	du papier gris
brown sugar	de la cassonade

are not examples of a divergent segmentation of the reality known as "brown" in the spectrum of colors, leading to a more nuanced rendition of this color in the French lexicon, but in fact, examples of divergent lexemic idioms in French and English, "brown" in English being allowed a wider range of metaphoric extension than its French generic equivalent "brun".

6.2 THE CONCEPT 'TO UNDERSTAND' AND ITS FRENCH EQUIVALENT 'COMPRENDRE'

The concept 'to understand' and its French equivalent 'comprendre', stem from the same metaphoric extension process, that is a passage from a concrete plane to a more abstract one known as Kronasser's law. However, the metaphoric extension that "understand" has been allowed to acquire in English, far exceeds the one that French "comprendre" has been given free rein for. The wide divergence of metaphoric extension allowed to these two concepts will cause "comprendre" to have much less semantic extension than its commonly accepted equivalent "to understand". The use of the lexeme "comprendre" will consequently be more restricted. According to the sememe carried by "to understand" in a specific context, its French lexemic rendition will vary greatly. The French

lexeme arrived at in translation will therefore be a sememic equivalence, and the realized lexeme will be in many cases, the sememic content of "to understand".

Examples:

ENGLISH CATEGORY	FRENCH CATEGORY
understand	paraître
I understand you speak many languages.	Il paraît que vous parlez plusieurs langues.
understand	comprendre
She understands many languages.	Elle comprend plusieurs langues.
understand	s'y connaître
He understands computer science.	Il s'y connaît en informatique.
understand	s'interpréter
This sentence can be understood this way.	Cette phrase peut s'interpréter ainsi.
understand	s'entendre
This couple understands each other.	Ce couple s'entend bien.
understand	sous-entendu/aller sans dire
This word is understood.	Ce mot est sous-entendu.
That's understood.	Il va sans dire.

The sememic value of "understand" is:

S/'hear-say'
 S/'comprehend'
 S/'expert at'
 S/'decipher'
 S/'get along'
 S/'unexpressed'

The lexical deviation witnessed in the above examples between French and English, is a consequence of the fact that in the case of "comprendre", metaphoric extension is very limited. In the case of "understand", the metaphoric extension process was very productive.

6.3 TIME IS MONEY./ LE TEMPS, C'EST DE L'ARGENT.

Dictionaries of proverbs and sayings tell us that the French saying "Le temps, c'est de l'argent." is a loan-translation of the English saying "Time is money." Does it follow that the French lexicon and the English lexicon will parallel each other perfectly in all the cases when "time" and "money" are juxtaposed as metaphoric extension of each other? The answer is "no" as will be seen in the examples which follow, for the metaphoric extension process can go only as far as will be allowed

by the lexicon of the languages involved in the process.

ENGLISH

FRENCH

Time is money.

Le temps, c'est de l'argent.

to give money/to give time donner de l'argent/donner du temps

to lose money/to lose time perdre de l'argent/perdre du temps

THE PARALLEL STOPS HERE.

to waste money/ to waste time gaspiller de l'argent/ perdre du temps

to spend money/to spend time dépenser de l'argent/ passer du temps

to budget money/to budget time faire son budget/ organiser son temps

to live on borrowed money/ to live on borrowed time vivre sur des emprunts/ avoir peu de temps à vivre

It is interesting to see that the discrepancy is larger in the case of time/temps than in the case of money/argent. It may well support the assertion that French is more abstract than English and that its lexicon possesses a greater capability for abstraction. Metaphoric extension being an abstraction process would not therefore be so widespread in French in the case of a more abstract entity.

6.4 METAPHORIC CREATIONS AND CULTURAL REWRITING TO COMPENSATE FOR CULTURAL DIFFERENCES

The expression "the right and the wrong side of the tracks" supports vividly the fact that language and culture are very closely intertwined. In translating one language into another, one must make sure that not only the words find their true equivalent in the translation, but also the culture they represent, the "way of life" of the people who speak that language, their social institutions.

Thus, many American cities are crossed by railroad tracks. And in many cases the people living on one side of the tracks are richer and of a higher social class than the ones inhabiting the other side of the tracks. Consequently, an American father may well be heard telling his

daughter: "You should not go out with this young man, he is from the wrong side of the tracks." Since French cities are not usually constructed in a similar fashion, a French father expressing the same reservation will have to say: "Tu ne devrais pas fréquenter ce jeune homme, il n'est pas de notre milieu." ou "Tu ne devrais pas fréquenter ce jeune homme, il n'est pas de notre rang."

In French hotels and houses, the first floor is the "rez-de chaussée", and the second floor is "le premier". An American writing a letter to a French person asking to live on the first floor of a French house or hotel because of a physical handicap, and using the word "premier" to express his/her request, will be very disappointed to have to climb a flight of stairs to reach his/her room during his/her stay in Paris.

Examples of such cultural faux-amis abound in French and English. Even a word for word translation of the structure of a French sentence into English may lead to a faux-pas of a metalinguistic nature. "Il s'est fait renverser par un camion.", is not translated "He had a truck hit him.", but just "A truck hit him." In this case we have an idiomatic use of the causative "se faire" in which the causative form is semantically empty. The difference between the two translations is enormous. The first translation depicts a suicide, while the other is just an accident.

7.0 CONCLUSION

As shown in this paper, the segmentation of reality, the lexical categorization and metaphoric extension processes in all their diversity, must be taken into consideration at all levels of the language structure for a bona-fide translation to be reached between two languages.

Translating can be compared to entering a dark tunnel. In the tunnel one encounters a large number of obstacles. Along the way, some dim light may appear. But one must always remember that the bright light at the end of the tunnel is usually an on-coming train.

It is hoped that the few observations made in this paper, and some of the conclusions reached will contribute to remind the students of French and English, and the translators, of the traps which lie hidden on the path of translation, and will, at the same time keep them on the right track while performing this tedious and difficult task.

REFERENCES

- Bolinger, Dwight. 1975. Aspects of Language. Second Edition. New York: Harcourt, Brace, Jovanovich.
- Darbelnet, J. 1977. Pensée et Structure. 2^e édition. New York: Scribners.
- Kronasser, H. 1952. Handbuch der Semasiologie. Heidelberg.
- Pergnier, Maurice. 1980. Les fondements sociolinguistiques de la traduction. Paris. Honoré Champion.
- Valesio, Paolo. 1974. Alliteration and the Grammar of Rhetoric. Manuscript.
- Van Hoof, Henri. 1989. Traduire l'anglais. Théorie et pratique. Paris. Duculot.
- Vinay, J.P., Darbelnet, J. 1958. Stylistique comparée du français et de l'anglais. Paris. Didier.
- Whorf, Benjamin Lee. 1956. Language, Thought and Reality. New York. Wiley and Sons.

STUDY OF SIMPLIFICATION OF NEWS REPORTS

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This paper presents findings of the third in a series of studies on simplification of texts for English as a second language (ESL) learners. Two previous studies investigated narrative and non-narrative (non-news) discourse. These studies argue that simplicity as the result of text simplification presents homogenized schemata of English texts which do not contribute to the learner's building of schemata that can be accessed during other similar readings. On the contrary, it encourages learners to read word-for-word or sentence-by-sentence, to fail to acquire the schemata necessary for interpretation, and to remain excluded from the communicative act of reading.

Previous investigation of simplification of narratives has demonstrated that simplification generates complex consequences for the resulting narrative (Laube, 1991). Simplification eliminates textual matter which originally stages various parts of the narrative in relation to each other and devices which define the author-reader relationship vis-a-vis the narrative. Also, because of syntactic and lexical simplification, all clauses are presented as foregrounded narrative clauses. Simplification also restricts the narrative structure to only those narrative units presenting the Complicating Action (term borrowed from Labov, 1972).

The findings of non-narrative text analysis reflect similar consequences: At the text level, these simplified texts alter the distinctiveness of the original writer's style, purpose and relationship to the text and reader. All such non-narrative texts, within and across, simplified textbooks have the same "sound" and "look" because of the common word frequency lists, "core" grammatical structures of English, and layout for preparing these materials.

The current study analyzes simplified and original news discourse and linguistic style using the schema outlined by T. van Dijk (1986 and elsewhere) and the description of "journalese" offered by D. Crystal and D. Davy (1969). The purposes of the study are (1) to establish the text differences that result from the simplification, (2) to provide tentative comparisons to findings of previous analyses of simplification of narrative and non-narrative discourse; and (3) to sketch theoretical connections among simplicity, readability, and accessibility /learnability.

Analytical Discourse Framework

To analyze the global structure of the simplified texts used in this investigation, I adopted the schema van Dijk elaborates in Cooper and Greenbaum (1986). In his chapter on "News Schemata" van Dijk argues that news discourse follows well known schematic categories like Headline and Lead as well as categories for the body of the news report--all forming a hierarchically organized macrostructure. He further argues that news schemata are universal, a point of major implications relevant to my third purpose as stated above (and taken up at the end of this paper).

The news story is a discourse genre distinctive from comics, weather, stock reports, etc., by lay-out, headline, placement and categories at the top of a page. News reports are similar to narratives in that they tell of an event; unique to news reports, these events are of past events considered worthy of public interest, featuring well-known political and social figures (p. 160).

The first category in van Dijk's schema is the Summary, similar in function to the narrative's Abstract. The Summary consists of the Headline and the Lead (usually the first sentence or paragraph), which together introduce the important themes of the report (forming the macroproposition). The Lead presents the conventionalized introduction to the news event--the major information as to who, what, when, where, why, etc. The body of the report organizes the most relevant events. The Main Events usually report the major causes, components or results. In contrast, the Background category organizes the information that either situates the specific event within general current circumstances (Context) and/or discusses circumstances that preceded the main event (Previous Events). His History category refers to the past context that ultimately leads to the actual situation but not to its immediate causes.

The Consequences category, usually written later in a news report, presents information about actions and events that immediately follow the main news events (as caused by the main event). The most stable and extensively used subcategory is the reporting of Verbal Reactions of national and international leaders. Together the above categories and subcategories constitute the core of the news story which van Dijk calls an Episode.

Analytical Linguistics Framework

Of the many stylistic features of news discourse Crystal and Davy (1969) offer, the following are most useful to this study. News report paragraphs tend to be short in terms of the number of sentences which are ordered around a single theme.

¹ A final category, Comments, is optional. This category presents subjective speculations or expectations of future events.

Grammatical variation is limited: verbs are restricted to active simple past, with a few modals and the rare passive; NP's are pre or post modified as a way to compress information into tight syntactic patterns, a similar function is attributable to appositives; adverbials are common because of the demands of news reporting. Coherence is achieved through anaphora and inter-sentence coordination.

News Stories Analyzed

Because news dates quickly, ESL texts containing news tend to present human interest stories which depend on less background knowledge situated in world or national events. I chose three articles anthologized in an ESL text entitled *The Smalltown Daily* (1984). The title is descriptive; most articles were taken from the *Brattleboro* [Vermont] *Reformer*. Because the articles I chose were UPI stories (and therefore not written by a particular writer), I was able to obtain the *NY Times*' versions of these same stories. All three articles report events from 1983.

The ESL versions of the stories are marked as elementary level in the text with an asterisk. While the editors of the text do not state the principles for editing, they offer these words:

The articles have been edited and re-written by the editors, but throughout the book every effort has been made to maintain the tone and spirit of the original piece...but we will accept responsibility for altering the prose where alteration was necessary for our purposes. (ii) (emphasis is mine)

Although they do not state their purposes explicitly, it seems obvious in their Introduction (p. v) that the main purpose for the articles labeled elementary is high readability through simplification. They describe these articles "to be shorter, to have relatively simple grammatical constructions, and to have limited vocabulary. They have been considerably edited and re-written." Given the evidence that these three UPI articles were simplified in the ways I have documented in previous studies, I am able to examine how they manifest the news schema and how they differ from the way the *NY Times* reported the same event(s).

The articles report different kinds of news events. One reports the opening of the Japanese undersea railway tunnel; another reports the awarding of the Nobel Peace Prize to Lech Walesa; the third reports the crowning of Vanessa Williams as the first black Miss America. Thus, two are international in scope, the other national (U.S.).

Analysis of News Stories

1) Being the shortest in both sources, the news story about the undersea tunnel is the least complicated to analyze. Yet the differences are prototypic of the kinds of differences found in analyzing the other two stories as well. In my analysis of

narratives (Laube, 1990), I demonstrated how titles set different stages for the same story. The same can be said in a comparison of the Headlines of these news reports. In the simplified version, the primary theme is the completion of the tunnel, the length is a secondary theme "World's Longest Tunnel Is Completed." The non-simplified version sets the primary theme in the Headline as the size, "Japan Tunnel Ranks As Largest in World."

The subsequent Leads in each article reveal different microthemes. The simplified version focuses on Prime Minister Nakasone's pressing a detonator button in the first paragraph, signalling the opening (and the completion) of the tunnel. The simplified version presents the theme of the length as Context in the second paragraph. It is clearly not intended as part of the Main Event because the main verbs are simple present. In the third paragraph, the simplified moves from Context to Consequences. The fourth paragraph presents the Previous Event that led to the construction of the tunnel. The final paragraph, as signalled by will, presents the future Consequence of the action being reported.

The *NY Times* version's Lead establishes as the significant event that the engineers finished the longest (an echo of largest in the Headline) tunnel. Presented in the second paragraph, the Prime Minister's actions are part of this version's Main Events. The third paragraph is part of the Consequences specifically the Context), focusing on the tunnel's course and projected total cost when it is finished three years in the future. No Previous events or History are presented except indirectly in the adverbial "when the 22 years of work are completed..."

I have provided a brief surface comparison. An examination of the syntactic differences reveals more details about how the same information is organized. As already established, the simplified version consists of five paragraphs, of 1-3 sentences in length and averaging 12.1 words per sentence. Of these, two report Main Events, in the first paragraph. Except for one sentence which opens with two adverbials, all the simplified version's sentences are single theme sentences. Coherence is achieved by using pronouns (Prime Minister < he, an explosion < this) and definite articles (an explosion < the explosion).

By contrast, the compression of the non-simplified story is substantiated by the fact that this article contains three single-sentence paragraphs, averaging 28 words per sentence (over double the length in the simplified). The Lead, for example, restates the macro theme of the Headline twice by embedding the actual mile length as a pre NP modifier of tunnel and in an appositive "the longest [tunnel] in the world." The sequential actions of Nakasone are presented as participial phrases in the second paragraph. The final paragraph (the longest with 38 words) embeds the route of the tunnel as a post modifying participial of tunnel, the length of time spent on the project as the subject of an adverbial and the completion date embedded within a gerund after with. Most of the embedded facts appear as separate sentences in the simplified version, with any differences in reported facts

still presented as separate sentences.

2) An analysis of the two versions of the Lech Walesa story reveals the complexity of the differences. The basic facts of the news event are the same, presented in the first paragraphs; however, while the simplified version consists of 4 paragraphs, the *NY Times* version spans 20 paragraphs beginning on the front page and continued on p. 10.

In the simplified version, the first paragraph contains the Lead and Main Events. It consists of three sentences: the first presents the who, what and when; the second provides Background; the third presents the why. The second and third paragraphs present information about what Walesa was doing prior to receiving the news. The final paragraph presents the Verbal Reactions from world leaders.

Again the version of the story contains paragraphs consisting of 1-4 short sentences, averaging 12.27 words per sentence (a total of 11 sentences). In ten of these sentences Walesa is the subject; the last sentence is passive with a nominalized subject. Two sentences contain adverbial clauses and 4 contain noun clauses as reported speech (one is a direct quote). Coherence is achieved by the use of pronouns, he as the subject of 6 of 10 sentences. The high percentage of sentences reporting the events is represented by the 6 simple past verbs and single past progressive verb.

The *NY Times* story is more informative. As a major news event, its Headline is printed in all caps. The Headline is followed by a sub-headline. The entire article is divided into five sections, each marked by a sub-headline and consisting of 3-5 paragraphs. The first section is very interesting in that the last 2 paragraphs are bracketed and pulled out to appear separately on later pages in the newspaper (the Consequences are divided into the Polish government's and world leaders' reactions). The points made in the simplified version appear throughout the longer version: what Walesa was doing at the time of the announcement becomes a sub-headline and his reaction is detailed in the third paragraph of the last sub-section. The problem of Walesa's freedom to travel is mentioned in the fourth section, subtitled "79 Candidates for Prize."

The most striking contrast between the two versions is the "typical" *NY Times* depth of presentation. It contains several paragraphs detailing Main Events, Circumstances and History. We learn about the will of Alfred Nobel and his reasons for establishing the Peace prize. We learn about other nominees for and previous winners of the Prize. We read a brief interview with the Peace Prize selection committee chairperson.

Not surprisingly, the non-simplified version is different syntactically. The paragraphs range from 1-3 sentences each, averaging 30.4 words. As in the previous story's analysis, the longer sentences come from the compression achieved by multiple embeddings in a single sentence. For example, the following sentence contains two appositives and a relative clause plus at

least three pre-modified and two post-modified NP's: " Mr. Walesa, an electrician, led a shipyard strike in Gdansk in August 1980 that resulted in the establishment of a free labor union, an unparalleled event in the history of Soviet-dominated Eastern Europe." The news article directly quotes Alfred Nobel's will, and twice each the award citation, the chair of the selection committee, the committee secretary, and the committee itself.

3) The final news story analyzed announces the selection of (the now infamous) Vanessa Williams as the first black Miss America. As with the previous story examined, the two versions of Ms. Williams' selection are strikingly different in the same ways. Again the basic facts of the same news event are reported: she was crowned Miss America on Saturday, that she is the first black woman to be so crowned, that press coverage of her race overshadows her talent, and that she aspires to being a Broadway star. However, how these facts are presented differ from the start, with the headlines of each version.

The simplified version, "New Miss America Controversial," sets up two news themes: the crowning of a new Miss America and the sense of a conflict concerning her title. The first paragraph gives the Summary of who, what, when but saves the import of the headline till the second paragraph in which her stand for abortion choice is presented as the controversy. (No mention of this appears in the *NY Times* version.) The topic of her stand on abortion, really the highest macroproposition of the story, is also the Consequence contextualized in an apparent interview the day following her crowning. The third paragraph continues the apparent interview and discusses her occasional annoyance at reporters' focus on her race.

Van Dijk states that sometimes Consequences "...downgrade the actual main events within the news story..." While the simplified version does just that, the non-simplified version highlights a very different topic, as presented in the three physical headlines that form the Headline: "To First Black Miss America, Victory Is a Means to an End" on the front page, "Part of a Career Plan" after the third paragraph, and "Miss American Calls Victory a Career Step" on page B4. There can be no doubt what the highest macroproposition is for this version. The Lead maintains the theme that winning the pageant was not her goal.

This version of the news story presents several paragraphs that form Background: The Context discusses who the judges are and their reflections on the process and how the other black contestants did in the competition; the History traces the entrance of black women in the pageant over the years, Ms. Williams' career in school; the Consequences quotes her parents, black leaders (which was also pulled out as a separate article on page B4), former teachers, the pageant's chairperson, and even Ms. Williams. None of this is presented in the simplified version.

I will not belabor the syntactic analyses, as I found them to reflect the same differences in complexity and patterns as previously discussed. Of the 12 independent clauses in the

simplified version, only two have subjects other than Ms. Williams. However, while the actual news event is reported in the past, static discussion about her is done in the present. "Vanessa Williams is the first black woman... She won the title on Saturday..."

Summary of Findings

In general, the simplified news stories tend to present only the basic facts within the Summary and Main Events categories, which is in keeping with van Dijk's claim that these are the minimal categories that constitute news schema. When other categories do appear, the information is far less detailed and even summarized. The History category is rare as are Previous Events.

In either versions of the stories, we see a general trend to uphold van Dijk's suggested hierarchical order of the categories: Headline and Lead and Main Events come first and in that order; the other categories may appear in a less fixed order, with Verbal Reactions usually at the end.

Implications

As with my previous studies of text simplification, this study demonstrates differences in the schema and linguistic styles. One possible consequence I have consistently argued for in all three studies is that the simplified versions do not contribute to the schemata building necessary for "good" reading. Yet, as van Dijk suggests, experimental evidence exists for the "cognitive [and social] implications of the nature and uses of news schemata" in process (reading) or in production (writing). Such is the focus of my next research in this area.

However, one important implication stands out. As with the previous studies, I have explored frameworks by which the "well-formedness" of the simplified discourse ESL practitioners present to learners could be evaluated. My research certainly calls into question the well-formedness of the simplified news texts I have analyzed. Another implication centers on the accessibility of simplified texts as input for learners. SLA researchers suggest that the input is accessible if it is sufficiently rich. If the simplified texts offered ESL learners do not pass tests of well-formedness, then how can they be considered as textually adequate input? It may be that learners access schemata from their own linguistic and cultural practices when the text offered to them is sparse. If this is so, what about non-literates learning to read a second language? What schemata do they form if they have none of their own to access? I hope research will begin to answer these questions.

References

Chira, S. Sept. 19, 1983. To First Black Miss America, Victory Is a Means to an End. *NY Times*.

- Crystal, D. and D. Davy. 1969. The Language of Newspaper Reporting. In *Investigating English Style*, ch 7, pp. 173-192.
- Japan Tunnel Ranks as Largest in World. Jan. 28, 1983. *NY Times*.
- Labov, W. 1972. The Transformation of Experience in Narrative Syntax. In *Language in the Inner City*, ed. by W. Labov. Philadelphia: U of Pennsylvania P.
- Laube, L. 1991. Simplification of Narratives for ESL: A Discourse Analysis. In *The Seventeenth LACUS Forum 1990*, ed. by A. Volpe. Lake Bluff, IL: LACUS.
- Laube, L. In press. An Investigation of Simplification of Non-Narrative ESL Texts. In *The Eighteenth LACUS Forum 1991*, ed. by R. Brend and R. Bailey. Lake Bluff, IL: LACUS.
- Miller, J. N. and R. C. Clark, eds. 1984. *Smalltown Daily*. Brattleboro, VT: Pro Lingua Assoc.
- van Dijk, T. A. 1986. News Schemata. In *Studying Writing: Linguistic Approaches*, ed. by C. R. Cooper and S. Greenbaum. Beverly Hills, CA: Sage.
- van Dijk, T. A. 1985. *News as Discourse*. New York: Longman.
- Vinocur, J. October 6, 1983. Lech Walesa Wins Nobel Peace Prize for Union Effort. *NY Times*.

THE DRAMATIC VALUE OF HAMLET'S VERBAL EXPRESSIONS: A LINGUISTIC-LITERARY ANALYSIS

"suit the action to the word; the word/ to the
action;" (*Hamlet: III.ii.16-17*)

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I. Introduction

This paper will attempt to examine an uncommonly dealt with aspect of Shakespeare's artistry, focusing on a linguistic-stylistic approach as an enlightening aid in literary analysis. We shall study Shakespeare's application of the dramatic value of the verb in depicting the character of his most diverse, controversial hero – Hamlet (Shakespeare 1603), whose delay in carrying out the Ghost's injunction to revenge the murder of his father is at the heart of the oft-disputed interpretations of his character, "the subject of more discussion than any other in the whole literature of the world" (Bradley 1955:80 (1904)); "no theory of his character will ever satisfy all men or all ages" (Goddard 1967:331).

Hamlet is the meditating noble Prince, a brilliant scholar, a lover of art and philosophy, a believer in human righteousness, moral integrity and spiritual values longing for that harmonious commingling of "blood and judgement" that he so admires in his friend Horatio.

Hamlet. blest are those
Whose blood and judgement are so well commingled
That they are not a pipe for Fortune's finger
To play what stop he please. Give me that man
That is not passion's slave, and I will wear him
In my heart's core, ay, in my heart of heart,
As I do thee. (III.ii.63 - 69)

This is his outline of the ideal personality – a character, he admits, diametrically opposite his own duality. He is loving and gentle to his friends, beloved and respected by them and by the multitude (I.i.173, I.ii.250–254, II.ii.279–285, IV.iii.4, IV.vii.18). But he can be violent, impetuous, cynical, rash and indiscriminate under special circumstances when his behavior unequivocally contradicts his sensible advice to the players to "acquire and beget...temperance" so as to control "the very torrent, tempest and...whirlwind of your passion" (III.ii.4–8). He can be cruel and insensitive, as to Ophelia (III.i; III.ii) and to his mother (III.iv).

He has undergone a heart-breaking shock, has accepted the ghost's "dread command" to revenge his father's murder – a binding moral obligation that negates his philosophy, is against his grain. Hurlled into an inner conflict waging between spirit and instinct, between his philosophy that he loves and blood revenge that he shrinks from, he is a divided self painfully conscious of his irresolution. His delay – crux of his tragedy –, his gnawing awareness of it, becomes a protracted torturing obsession, the source of his philosophical probings.

When, for he must, does Hamlet act? Under what circumstances? What is the nature of his "interims" of suspended action? In equating verb to action, action to character, to what extent, if at all, do Hamlet's verbal expressions reflect the dramatic movement of his varying moods, his 'active' or 'non-active' semantic role, his character?

II. A Linguistic Methodology

Applying the linguistic methodology developed for a study of Lear's verbal expressions (Nameri 1984, 1990), we shall examine the stylistic means *in terms of verbal expressions* by which Shakespeare conveys Hamlet's 'activity' or 'passivity'. In other words, where is Hamlet's *semantic role* that of an *agentive* ('active') or a *non-agentive* participant *in the action described by the verb in the proposition*? We shall thus confine Hamlet's participant role to two types: *Agentive* (A) and *Non-Agentive* (NA), the latter embodying *Patient* and *Experiencer*. The only way we can talk about Hamlet as *Agent* or as *Non-Agent* in the linguistic sense is *if he figures as a participant in the semantics of the proposition*. We shall, then, consider only those of Hamlet's speeches *in which he refers to himself* (deleted pronouns or other references to himself must be inferred) as *Agent* of the action described by the verbal expression in the clause, or as *Patient* or *Experiencer*, i.e., *Non-Agent*.

The semantic role of *Agent* will be defined in general terms as that of the *participant who intentionally and voluntarily initiates or causes the action described by a non-stative (action, dynamic) verb in the clause* ("I'll follow it". I.iv.68). The semantic role of *Patient* will be defined as that of the *participant who is the recipient of the action described by such a verb* ("perhaps...he...abuses me to damn me", II.ii.576-579). The semantic role of *Experiencer* will be defined as that of the subject of a *stative* (non-action) verb ("I am but mad north-north-west", II.ii.360), and as that of the entity in the 'Dative' case ("who does me this?", II.ii.549; "It did me yeoman's service", V.ii.36). We shall define a *stative* verb as a verb denoting a *mental state* (e.g. verbs of perception, cognition, reaction, etc.), or a *relation* (e.g. verbs denoting existence, possession, negation, equation, etc.) (see esp. Lakoff 1966, Vendler 1966, Joos 1968: 116-119, King 1970, Scovel 1971, Miller & Laird 1976, Lyons 1977, McIntosh 1977, Halliday 1978: 64,84,148-149, Hopper & Thompson 1980).

Two parallel lines of proof will be drawn to test the measure of compatibility between the action and the verbal expression ("the word"), thus Hamlet's semantic role as *Agentive* (A) or *Non-Agentive* (NA). One line of proof will be to look at all of Hamlet's distinct *Agentive* (A) speech acts: imperatives (I), entreaties (E), curses (C), oaths (O) and threats (Th) (see esp., Jakobson 1960, Austin 1962, Searle 1970, Ohman 1973, Lyons 1977). The second line of proof will be to see where Hamlet is an *Agentive* (A) or a *Non-Agentive* (NA) participant *when he makes reference to himself, or where he is not mentioned but understood (inferred) in the grammatical sense*. Thus we shall use *Agentive* (A) in two different senses:

(1) Hamlet's *explicit performative* speech acts - imperatives, entreaties, oaths, curses and threats. All denote *Agentivity* (A).

(2) Other verbal expressions (as described above in the second line of proof) in which *the verb in the main clause of the utterance* will determine who (Agent or Non-Agent) is governing the action described by that verb and its complements (modals, etc). These verbal expressions will include

imperatives (I) and entreaties (E) where Hamlet is referring to himself but is not necessarily in the *Agentive* (A) role. They will be marked as *Agentive* (A) in describing the role of the participant who utters this speech act (imperative or entreaty), and as *Non-Agentive* (NA) in describing the role of the participant who in this same speech act is not the *Agent*, but the *Patient* or *Experiencer*. In the NA category these will be marked (I₂) and (E₂), respectively.

A. Examples of the Two Lines of Proof:

Line of Proof 1. (A):

- a. "I pray thee, do not mock me." (I.ii.77)(A)(E)
- b. "I have sworn't" (I.v.112)(A)(O)
- c. "To a nunnery, go." (III.i.149)(A)(I)
- d. "Do not look upon me,/Lest..." (III.iv.127-129)(A)(I)

Line of Proof 2. (A) or (NA):

- a. "I pray thee, do not mock me." (I.ii.77)(NA)(E₂)
- b. "And now I'll do't," (III.iii.74)(A)
- c. "Do not look upon me,/Lest..." (III.iv.127-129)(NA)(I₂)
- d. "How all occasions do inform against me," (IV.iv.32)(NA)

B. Examples of Selected Types of Hamlet's Verbal Expressions:

Let us bear in mind that it is hardly characteristic of language to make absolute clear-cut distinctions. There may be discrepancies, "leakages" (Sapir 1949:38). We must constantly be aware of the verb (+ complements) *within its dramatic context*, "look at the language as a whole" (Jespersen 1924:51, Firth 1962, Austin 1962, Halliday 1978: 33, 142).

1) *Performatives/Illocutionary Acts* (Austin 1962, Searler 1970) (A)

- a. "I shall...obey you, madam." (I.ii.120)
 - b. "I'll call thee Hamlet." (I.iv.44)
 - c. "I do beseech you," (III.ii.339)
 - d. "we defy augury," (V.ii.207)
- 2) "LET" (me, us, etc.) constructions, considered as imperatives (I) or entreaties (E) (Quirk et al. 1972, Doran 1976: 94) (A). Some are also (NA), of Line of Proof 2 (marked I₂ or E₂; my italics):
- a. "Let us go in together." (I.v.187)(I)(I₂)
 - b. "Let the doors be shut upon him..." (III.i.132)(I)
 - c. "Let not ever the soul of Nero enter this [my] firm bosom;" (III.ii.376-377)(E),(E₂)

3) *Imperatives, Entreaties or Other Propositions where the Verb is Omitted but understood (Inferred): (A) or (NA):*

- a. "[Go] away!" (I.iv.86)(A)
- b. "and so will I [be buried]." (V.i.267)(NA)

4) *Deletions of Pronouns and other References to Hamlet will be Inferred (A) or (NA):*

- a. "Safely stowed." [by me] (IV.ii.1)(A)
- b. "[I] had my desire." (V.ii.14)(NA)

5) *Deletions of Pronouns (or Nouns) and Verbs are inferred by Force of the Propositions, often governed by a preceding utterance: (A) or (NA):*

- a. "tell [me]
Why thy canonized bones ...

- Have burst their cerements," (I.iv.46-48)(A),(NA-E₂)
 b. "[tell me] why the sepulchre ...
 Hath oped his ponderous ... jaws,
 To cast thee up again." (I.iv.48-51)(A),(NA-E₂)
- 6) *Unreal, Conditional, or Imaginary Constructions* (NA):
 a. "Would I had met my dearest foe in heaven
 Or ever I had seen that day, Horatio." (I.ii.182-183)(NA)
- 7) *Hamlet's References to the Universal "we", "us" etc. will not be considered:*
- C. *Our Counting Scheme*
- 1) *A verbal expression* (verb, verb + complements: modals, subordinate clauses, etc.) *will be given a value (count) of one when it constitutes a complete, independent speech act, idea, in its dramatic context. This also includes:* "Prithee", "Pray", "Pray you", followed by an infinitive and conditional constructions:
 a. "Prithee, / say on;" (II.ii.477-478)(A)
 value of one.
 b. if his occulted guilt
 Do not itself unkenel in one speech
 It is a damned ghost that we have seen," (III.ii.75-79)(NA)
 value of one.
- 2) *"Go" and "Come" and the infinite that follows will be counted separately:*
 a. "come, give us a taste of/
 your quality" (II.ii.411-412)(A)(A),
 (NA - I₂) value of
 three. Note the I₂
 b. "Go, make you ready." (III.ii.41)(A)(A)
 value of two

III. Hypothesis

My hypothesis is that there will be more *A* verbal expressions (*AVE*) — manifestations of his *A* semantic role — where Hamlet confronts the Ghost, the King, his mother — *the interrelated force motivating his dramatic action* —, Ophelia, his art — the play, the last scene — reconciliation, killing the King. There will be fewer *AVE* — manifestations of his *NA* semantic role — in the "interims" — his four great soliloquies —, his philosophizing, his deliberations on the act, his rationalizations.

IV. Linguistic Results and Literary Analysis — A Compatibility

Hamlet first appears in I.ii, dejected and deep in mourning. Shocked and heart-broken by the sudden death of his beloved father and the over-hasty marriage of his mother to his despicable uncle, he is filled with "that within which passeth show" (85). His despair, anguish and disillusion find vent in his first great soliloquy (129-159) where he talks of "self-slaughter", of the corruption in "this world" — *his* world, Denmark, the royal court. He senses that "all is not well", that there must be "some foul play" (254-255) when told by Horatio about the appearance of his father's spirit in arms (189-241). I.ii shows a low percentage of Hamlet's (*AVE*) — 33% of the total number of his verbal expressions *when referring to himself*. Most of the *Non-Agentive verbal expressions* (*NAVE*) here are governed by stative, verbs with Hamlet the Experiencer: "I *am* too much i' the sun" (67), "I *know* not seems" (76), "I *have* that within that passeth show" (85), *Must* I

remember?" (143), "I do *forget* myself" (161), "I *think* it was to see my mother's wedding" (178), "I *doubt* some foul play" (255) (my italics).

A sharp rise in Hamlet's AVE occurs in I.iv (59%) when he first encounters his father's Ghost and determines to follow and speak to it. Here we have such AVE as: "I will speak to thee;" (44), "O, answer me!" (45), "Then I will follow it" (63, 68), "Unhand me, gentlemen;" (84), "Go on;" (79, 80), "[Go] away!" (86), "I'll follow thee" (86).

I.v shows a further rise (66% AVE) when the Ghost discloses the vile manner of his murder by his treacherous brother Claudius and orders Hamlet to "Revenge his foul and most unnatural murder" (85). His concern, of a broader nature than that expected by the revenge tradition, is the corruption in Denmark, rooted in the royal court and Hamlet's mother. The emphasis is on the moral aspect of Hamlet's task:

Ghost. Let not the royal bed of Denmark be
A couch for luxury and damned incest.
But, howsoever thou pursuest this act,
Taint not thy mind, nor let thy soul contrive
Against thy mother aught; leave her to heaven,
And to those thorns that in her bosom lodge,
To prick and sting her. (I.v.82-88; my italics)

Hamlet vows to obey the Ghost's "commandment" (95-104). He will put on an "antic disposition" to disguise his emotions and plans. Burdened now by a task abhorrent to him, he is flung into a state of conflicting emotions, agonizing over and cursing the imposed responsibility so out of harmony with his very being.

Hamlet. The time is out of joint. O cursed spite
That ever I was born to set it right! (I.v.189-190)

Henceforth there is a tug of war within him between two opposing forces, frustrating, tormenting and blocking action.

The drop in Hamlet's AVE in the scene where he next appears (II.ii; 44%) is a reflection of his overwrought and abject state of mind projected poignantly in the passage with Rosencrantz and Guildenstern:

Hamlet: I have of late, — but wherefore I know not,
... lost all my mirth, forgone all custom of exercises;
and indeed it goes ... heavily with my disposition ... (II.ii.288-290).

Man, nature, the universe are in one breath both glorified and debased. The very nature of his language here, moving from the sublime to the ironic, from exaltation to morbid pessimism and melancholy is a true mirror of his confusion and agitation. This mood is dispelled by the arrival of the players whom he welcomes with joy and enthusiasm (402-409). Inspired, he requests an audition and resolves to put on a play — *The Murder of Gonzago*. But his happiness is short-lived, for the passion exhibited by the First Player reciting the assigned "Hecuba" speech arouses his slumbering sense of duty. Left alone, overcome by shame and self-reproof, he bursts out in his self-lacerating second great soliloquy: "Oh what a rogue and peasant slave am I!" (523-581). Here is this player, he argues, who has passion and oh, what an abundance of words! But has he a personal motive to justify his passion as he, Hamlet, has? "What's Hecuba to him, or he to

Hecuba, / That he should weep for her?" Conscious of the dichotomy within him, he reproaches himself for his procrastination, his futile words, his lack of courage: "Am I a coward?" His conscience nags at him: "Who calls me villain? breaks my pate across?" He questions his own integrity: "it cannot be / But I am pigeon-liver'd and lack gall / To make oppression bitter;" (551-553). Exasperated, he whips up courage in oaths and threats of vengeance (555-557). Then, shamed at his own ranting, he switches over to a new line of thought: "About my brain!" He will use the art he loves, the play, to test the truth of the Ghost and "the conscience of the King." The abundance here of Hamlet's verbal expressions of negation, doubt, self-abuse (all NA) evidences the predominance of his *Non-Agentive* semantic role in the scene.

Hamlet next appears in III.i sunk deep in reverie philosophizing in his third great soliloquy ("To be, or not to be"... 56-88). Completely detached, alienated from the world around him, he meditates on the universality of man, the moral essence of being, the superstate of man's existence, of his capacity to suffer, to fight, to endure, or to end it all by suicide. He ponders the relation of thought, of conscience, to action concluding that conscience makes cowards of us all leaving us bereft of hope or will to act. Although Hamlet *makes no reference to himself throughout this soliloquy*, the whole implies his sense of his own incapacities. Action on the part of Hamlet at this point is totally suspended (0% A; 0% NA) until the entrance of Ophelia. Confronted by her rejection (devised by her father - II.i.108-110, II.ii.140-150, II.ii.209-210) and suspecting that he is being spied upon to entrap him (schemed by Polonius, II.ii.161-166), he vents his harassed state of mind in an incensed volley of abuse dotted with irony in the course of which he repeatedly orders her, "Go thy ways to a nunnery" (129). This incident *dominated by imperatives* (42%), raises Hamlet's AVE in III.i to 58%.

Opening the climactic "Mousetrap" scene (III.ii), Hamlet, happy in the ambience of the players and excited by the prospects of his scheme, instructs them in the art of speech and acting: "Speak the speech, I pray you, as I pronounced it to you, trippingly on the tongue; ... use all gently; for in the very torrent, /tempest, and, ..., whirlwind of your passion, you/ must acquire and beget a temperance that may give it smoothness.... Be not too tame neither,...; suit, the action to the word, the word to the action." He puts on the play, directs it and, caught in the "whirlwind of passion" stripped of that "temperance" he has just counselled the players and impatient for the King's reaction, he interrupts it before the finale - "Begin, murderer, / Pox, leave thy damnable faces, and begin. Come; " - and exults when the King rises and rushes out. Hamlet's doubts are satisfied but he has betrayed the very art he loves by frustrating its ultimate end. III.ii, with its crucial toll of consequences issuing from Hamlet's intemperance, shows a relatively high percentage of his AVE (56%).

In III.iii, Hamlet on his way to his mother's chamber comes upon the King kneeling at prayer. Here is his ideal opportunity to obey the Ghost's injunction, yet he hesitates, blocked by his want of resolution and his aversion to the act. He rationalizes on the outcome of the deed whereby he would "this same villain send / To heaven" (77-78), digs up grounds for an unbecoming excuse - and *does nothing*. His AVE here drops, accordingly, to 47%.

The dramatic peak in Hamlet's *AVE* (71%) is reached in the "closet" scene with his mother (III.iv) where he commits the rash and indiscriminate act of killing Polonius (repented later (175)). Having vowed to "be cruel", to "speak daggers to her" (in his "Nero" soliloquy, III.ii.378-379), he now proceeds to do so, launching a scathing verbal attack on her halted dramatically by the advent of the Ghost come to remind him of his "blunted purpose" — to be governed, however, by the moral aspect of the deed, as he had defined it earlier (see p. 5 above). Softened, Hamlet urges his mother to "confess", "repent", "refrain", abstain from further corruption and ultimately succeeds in arousing her conscience, her self-recognition and remorse.

Queen. O Hamlet, speak, no more;
Thou turns't mine eyes into my very soul, ...
O, speak to me no more;
These words like daggers enter in mine ears.
No more, sweet Hamlet! ...
O Hamlet, thou hast cleft my heart in twain ...
What shall I do? (III.iv.88 ... 180)

Hamlet is reconciled. He has achieved *the* matter of cardinal concern to him. We note the corresponding rise in the percentage of his *AVE* here — 71% — *the highest in the play*.

In his next appearance (IV.ii), Hamlet's *AVE* drop to 54% — still high in relation to his *Agentive* role in the play as a whole. Feigning madness, he engages Rosencrantz and Guildenstern in "knavish speech" when questioned about the location of Polonius' body. His *AVE* rise to 63% in IV.iii where, exulting in his antic disposition, he mockingly riddles with the King about Polonius. Though he senses the King's "purposes", he accepts his decree to be sent "hence" to England "With fiery quickness" (41-45).

In IV.iv Hamlet encounters the forces of Fortinbras on their way to Poland "to gain a little patch of ground / That hath in it no profit but the name" (18-19). The irrationality of this futile martial enterprise evokes his fourth great self-accusing soliloquy (32-66). He contemplates the bold resolution of this "delicate and tender prince" to risk all for a mere "egg-shell", a "straw," when honor is at stake, while he, Hamlet, who has "cause, and will, and strength, and means / To do't" has "let all sleep." Shamed at the comparison, he vows "bloody ... thoughts" — but note, *not acts*. He cannot commit an act prescribed by a code of honor he questions. In II.ii he had in his abject state of mind perceived man, the essence of whose being he ponders throughout, as both a sublime creation and as but a "quintessence of dust" which "delights not me" (295-301). Now, as in his third great soliloquy (III.i), he questions yet again the essence of man, "What is a man,...? (33). What differentiates man from beast? The soliloquy, in direct reference to his delay, accentuates his frustration — his awareness of his weakness, his scruples, his irresolution. Hamlet has touched bottom. He vows, but does nothing regarding his concluding "bloody" resolution. In effect, he turns his back on it quitting the country — and is away for three consecutive scenes. IV.iv, reflecting Hamlet's almost total immobilization, shows the lowest percentage of his *AVE* in the play (31%). Dominating here are the *NAVE* prominent in his soliloquy (32-66), e.g., "all occasions *do inform against me*" (32), "I *do not know* / Why yet I

live ..." (43-46), "I *have* cause..." (45), "Examples, gross as earth, *exhort me*" (46) (*my italics*).

Hamlet next appears in a churchyard accompanied by Horatio (V.i). He has returned from the fateful sea-voyage, a changed man. He seems to have regained calm and confidence, as he muses philosophically with Horatio, jests with the Clowns in humor and irony on aspects of life, death and decay, now no longer accepting death with apprehension. His "poor Yorick" speech (173-181) recalls his gentle, loving nature. This mood comes to a dramatic reversal with the advent of Ophelia's corse. Distraught, he challenges Laertes's grief, grapples with him in Ophelia's grave, and overwrought, declares his unrivaled love for her. His violent outburst of "towering passion" subsides in his gentle profession of love for Laertes which ends ironically with unexpected philosophical scorn (278-280). This drastic change of moods so characteristic of her son is commented on with deep insight by the Queen:

Queen. This is mere madness;
And thus a while the fit will work on him;
Anon, as patient as the female dove
When that her golden couplets are disclosed,
His silence will sit drooping. (V.i.272-276)

The marked rise in Hamlet's *AVE* in V.i (48% from the 31% in IV.iv when he last appeared) is compatible with the change he has undergone and the development at Ophelia's grave — a dramatic necessity as action accelerates toward the inevitable tragic end.

In V.ii Hamlet relates to Horatio his discovery of the King's commission to England sent with Rosencrantz and Guildenstern ordering his execution on arrival and his spontaneous response which sent these traitors to their deaths. Declaring his conscience clear regarding their fate (58), he is now resolved to act. There will be no more self-torturing philosophical action-blocking soliloquies. "It will be short; the interim is mine" (73). Killing the King will now be an act of self-defense which he can commit with "perfect conscience" (67). He accepts the King's offer to fence with Laertes not suspecting the villainous plot to destroy him. He defies his own presentiment and Horatio's warning, confident that some divine power is guiding him. He is reconciled, has accepted the reality of life and death, of his own humanity: "we defy augury; there's a special / providence in the fall of a sparrow ... / the readiness is all" (207-210). His apology to Laertes before the duel is an enlightening manifestation of his newly-achieved grace and humility and an affirmation of love.

Both he and Laertes are mortally wounded by Laertes's "envenom'd" rapier. The Queen is poisoned by the potion prepared by the King for Hamlet. Laertes, dying, discloses the King's treachery, whereupon Hamlet, overpowered by instinct, runs his rapier through him and forces the remains of the poison down his throat. The "dread command" is fulfilled — not, however, after prolonged dark plotting but, as characteristic of Hamlet throughout, in passionate impulsive reaction to circumstances he had no hand in producing.

The rise in Hamlet's *AVE* in V.ii (55%) accords with the dramatic development of his semantic role here as *Agent*. It culminates in the imperative and entreating note of his concluding lines addressed to Horatio:

"report me and my cause aright Tell my story I do prophesy ...; he has my dying voice; So tell him, ... the rest is silence" (326–345).

V.ii mirrors a resolute Hamlet, the note already sounded in his letter to the King announcing his "sudden and more strange return" (IV.vii.43–48). He is eager, as ever, for love, sympathy and understanding, trusting in human uprightness, honesty and integrity — *his* code of honor —, unsuspecting of hypocrisy or foul play. He is gentle, humble, the "noble ... sweet" prince of Horatio's parting words, victim of "this harsh world" (V.ii.335) and his own divided self.

V. Conclusion

The results obtained in this study correlate with my initial hypothesis (see p. 4 above) evidencing the compatibility between Hamlet's A/NA verbal expressions and his corresponding semantic role. We have noted a high percentage of Hamlet's AVE in: 1) his confrontations with the Ghost: prompted to action, he pledges to obey the "dread command" (I.iv, 59%; I.v, 66%); 2) His confrontation with Ophelia in the "nunnery" scene (III.i, 58%); 3) the "Mousetrap" scene: (III.ii, 56%); 4) the "closet" scene: he succeeds in effecting a moral change in his mother (III.iv, 71% — *the highest in the play, with the highest percentage of imperatives* (50%) and entreaties (9%)); 5) his "antic disposition" scenes with Rosencrantz and Guildenstern (IV.ii, 62%) and with the King (IV.iii, 63%); 6) the last scene: sending to their deaths of Rosencrantz and Guildenstern (report); his apology to Laertes, the duel, killing the King, pledging his "dying voice" to Fortinbras (V.ii, 55%).

The low percentage of Hamlet's AVE is manifest most notably in his major "interims" — the four great self-lacerating, philosophic soliloquies. In isolation, these show in I.ii, 30% AVE ("O, that this too too solid flesh would melt, / Thaw, and resolve itself into a dew!"); in II.ii, 29% AVE ("Oh what a rogue and peasant slave am I!"); in III.i, 0% AVE / 0% NAVE ("To be, or not to be, ..."); in IV.iv, 18% AVE ("How all occasions do inform against me,"). We note the drop in the percentage of Hamlet's AVE from soliloquy to soliloquy in I.ii, II.ii and IV.iv in marked accord with his desolate, protracted delay, with the lowest in the central and unique "To be, or not to be" soliloquy (III.i) where totally withdrawn, he meditates *with no reference to himself* on the universality and mystery of man, of life and death. The slight rise of his AVE in his fourth soliloquy (IV.iv) to 18% from 0% in III.i is dramatically inevitable and accentuates the singularity of the latter. We note the low percentage of his AVE in III.iii (47%) where he evades his "golden" opportunity to kill the King. The entire IV.iv — Hamlet's encounter with the forces of Fortinbras which evokes his fourth great soliloquy — shows *the lowest percentage of his AVE in the play* (31%, *with a low percentage of imperatives* (13%) and entreaties (6%)). IV.iv, specifically his soliloquy, reflects Hamlet's self-proclaimed weakness. His tormenting inner conflict is acute, "How stand I then, / That have a father kill'd, a mother stain'd, / Excitements of my reason and my blood, / And let all sleep, while to my shame I see / The imminent death of twenty thousand men" (56–60).

A dramatic reversal is inevitable. Hamlet is absented, then, for three consecutive scenes returning from the climactic sea-voyage at V.i. The rise in his AVE in V.i to 48% accords dramatically with the movement toward the finale. It is to ascend further in V.ii (55%) with Hamlet

resolute, enlightened and reconciled. The procrastinated fearful act is at last committed — in keeping with his controversial nature — on impulse in the compulsive circumstances.

Hamlet's divided self has been evidenced throughout in the dramatic rise and fall of his *AVE* — palpable manifestations of his vacillating states of mind and modes of behavior, of the raging conflict stirred within him after accepting the Ghost's injunction (see Table 1 and Graph 1).

Let us recapitulate an instance, among others, of the poet's skill in manipulating the verb/the verbal expression to dramatize Hamlet's action-character relationship. Two short passages, 34 lines each, will serve to exemplify. The passage where Hamlet, happy for once, instructs the players in the art he loves (III.ii.1–36) shows 75% *AVE*/25% *NAVE* (The entire III.ii shows 56% *AVE*/44% *NAVE*). The relatively opposite ratio appears in his last self-torturing soliloquy disclosing his weakness, his indecision (IV.iv.32–66) where we find 18% *AVE*/82% *NAVE* (The entire IV.iv shows 31% *AVE*/69% *NAVE*). In the former passage (III.ii) Hamlet *joys in the act of creative instruction*: "suit the action to the word, the word / to the action; ... o'erstep/not the modesty of nature; ...". In the latter passage (IV.iv), alone, he vents his frustration in a self-lacerating soliloquy: "How all occasions do inform against me / And spur my dull revenge" Recall, too, the prominence of his *NA* role evidenced by the low percentage of his *AVE* in his four great soliloquies (see p. 9, above) and compare with his dominating *A* role in III.iv where he succeeds in morally converting his mother — *his major concern*: 71% *AVE*, the highest in the play.

The conclusive results analyzed in this paper illustrate an *additional* aspect of Shakespeare's artistry where he merges linguistics and stylistics in the creation of character — Hamlet, the most controversial character in literature. We shall suggest a *linguistic-literary* analysis as an aid in the interpretation of character, with the art of linguistics contributing invaluable in illuminating aspects of character that might otherwise be overlooked and/or misunderstood.

References

- Austin, J.L. 1962. *How to Do Things with Words*. The Williams James Lectures delivered at Harvard University in 1955, ed. J.O. Urmson, London: Oxford University Press, 169 p.
- Bradley, A.C. 1955 (1904). *Shakespearean Tragedy*. New York: Meridian.
- Doran, M. 1976. *Shakespeare's Dramatic Language*. Madison: University of Wisconsin Press.
- Firth, John R. 1962 (1957). "A Synopsis of Linguistic Theory 1933–1955", *Studies in Linguistic Analysis*. Oxford: Blackwell, 1–33.
- Goddard, Harold C. 1967 (1951). "Hamlet", *The Meaning of Shakespeare*. Chicago, London: The University of Chicago Press.
- Halliday, M.A.K. 1978. *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold, Baltimore, MD: University Park Press.
- Hopper, Paul J., Sandra A. Thompson. 1980. "Transitivity in Grammar and Discourse", *Language*, 56:2.
- Jakobson, Roman. 1960. "Linguistics and Poetics", in Thomas A. Sebeok, ed., *Style in Language*. Cambridge, Mass.: M.I.T. Press, 350–377.

- Jespersen, Otto. 1924. *The Philosophy of Grammar*. London: Allen and Unwin, New York: Holt.
- Joos, Martin. 1968. *The English Verb: Form and Meaning*. Madison, Milwaukee, London: The University of Wisconsin Press.
- King, Harold V. 1970. "Action and Aspect in English Verb Expressions", *Language Learning: A Journal of Applied Linguistics*, 2:1, 1-18.
- Lakoff, George. 1966. "Stative Adjectives and Verbs in English," in A.G. Gettinger et al., eds., Report NSF-17, Harvard Computational Laboratory. Cambridge, Mass.: Harvard University, I.1, 1-16.
- Lyons, John. 1977. *Semantics*. II. Cambridge, London, etc.: Cambridge University Press, 730-751.
- McIntosh, Carey. 1977. "A Matter of Style: Stative and Dynamic Predicates," *PMLA*, 92:1, 110-121.
- Miller, George A., Philip N. Johnson-Laird. 1976. *Language and Perception*. Cambridge, Mass.: Harvard University Press.
- Nameri, Dorothy E. 1984. "The Dramatic Value of Lear's Verbal Expressions: A Linguistic-Literary Analysis." In James Hogg, ed., *Jacobean Drama Studies* 95:4, *Jacobean Miscellany* 4. Universität Salzburg, 1-85. Includes Appendix 1: categorized verbal expressions; Appendix 2: descriptive features of verbs and semantic roles.
- _____. 1990. "Focus on Lear's Verbal Expressions: A Reflection of His Dramatic Development". *Proceedings of the Seventeenth LACUS Forum*. Lake Bluff, Illinois: LACUS, 300-312.
- Ohman, Richard, 1973. "Literature as Act". In Seymour Chatman, ed., *Approaches to Poetics*. New York, London: Columbia University Press, pp. 81-99.
- Quirk, Randolph, S. Greenbaum, G. Leech, J. Svartvik. 1972. *A Grammar of Contemporary English*. London: Longman, New York: Seminar Press, 403ff.
- Sapir, Edward. 1949 (1921). *Language: An Introduction to the Study of Speech*. New York: Harcourt, Brace & World.
- Scovel, Thomas. 1971. "Look and See," *Language Learning*, 21:1, 75-85.
- Searle, John R. 1970. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: At the University Press.
- Shakespeare, William. 1603. *A New Variorum Edition of Shakespeare: Hamlet*, ed. H.H. Furness. New York: Dover, 1963 (J.B. Lippincott, 1880).
- Vendler, Zeno. 1966. "Verbs and Times", *Linguistics in Philosophy*. Ithaca, New York: Cornell University Press. Ch. 4.

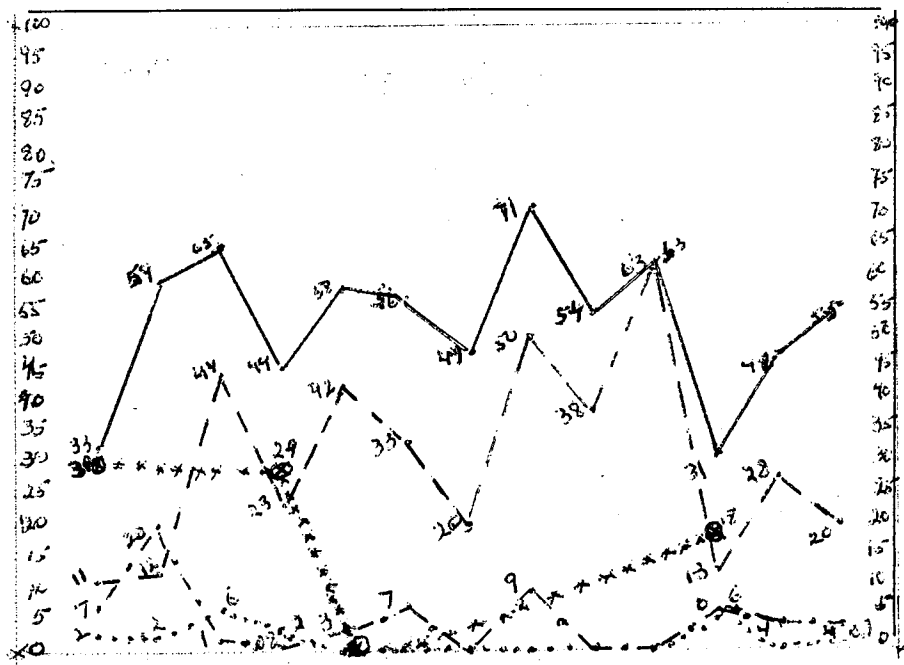
Table 1: Hamlet's Verbal Expressions. Lines of Proof 1 and 2

Key: (A)=Agentive; (NA)=Non-Agentive; VE=Verbal Expressions where Hamlet refers to himself, or where references to himself are inferred; TVE=Total number of VE; I=Imperative; E=Entreaty; O=Oath; % = Percentage in relation to TVE in the scene; Sol.=Soliloquy; H=Hamlet; G=Ghost

Ref. to H's ll.	Scene Id.	(A) VE	(NA) VE	T VE	% (A)	% (NA)	I	% I	E	% E	O	% O	% Sol.
I.ii.65- 258; 1st sol.	Hamlet hears of G.	18	36	54	33	67	6	11	4	7	1	2	1st 30
I.iv.1- 86	H.&G. first encounter	24	17	41	59	41	5	12	8	20	1	2	
I.v.1- 190	G's story; H. vows vengeance	47	25	72	65	35	32	44	1	1	4	6	
II.ii. 171-581 2nd sol.	Abject mood; greet players	58	75	133	44	56	31	23	1	0.8	2	2	2nd 29
III.i. 56-149 3rd sol.	"Nun- nery" scene	21	15	36	58	42	15	42	1	3			3rd 0
III.ii. 1-384	"Mouse- trap" scene	70	55	125	56	44	41	33	8	7			
III.iii. 73-96	King at prayer; H. evades	7	8	15	47	53	3	20					
III.iv 10-218	"Closet" scene	65	26	91	71	29	44	50	8	9			
IV.ii 1-30	H. with Ros. & Guild.	7	6	13	54	46	5	38					
IV.iii. 17-52	H. with the King	5	3	8	63	37	5	63					
IV.iv. 9-66 4th sol.	H.& Fort.'s forces	5	11	16	31	69	2	13	1	6	1	6	4th 18
V.i. 62-279	Grave- yard scene	22	24	46	48	52	13	28	2	4			
V.ii. 1-347	Killing the King	74	60	134	55	45	26	20	5	4	1	0.7	

Graph 1: Percentage of Hamlet's Agentive Verbal Expressions (AVE), Imperatives (I), Entreaties (E), and Oaths (O) in relation to the total number of his verbal expressions (TVE) in each scene.

Refs.	i.	i.	i.	ii.	iii.	iii.	iii.	iii.	iv.	iv.	iv.	v.	v.
	ii.	iv.	v.	ii.	i.	ii.	iii.	iv.	ii.	iii.	iv.	i.	ii.
	65-	1-	1-	171-	56-	1-	73-	5-	1-	17-	9-	62-	1-
	258	86	90	581	149	384	96	218	30	52	56	278	347
Scene	1st	H. H.	2nd	3rd	the	King	"Clo-	with	with	4th	Grave-	Kil-	
Id.	sol.	& hears	sol.	sol.	play	at	set"	Ros.	king	sol.	yard	ing	
	incl. G. G's	story	incl.	"nun-	prayer	scene	and	Guild		incl. scene	the	King	



Refs. = References (Act/scene/lines, where Hamlet is a participant and makes reference to himself, or where references to himself are inferred).

Key: — % of (AVE); --- % of (I); - · - % of (E); % of (O), xxxx % of AVE in the soliloquies (30%, 29%, 0%, 18%); 1 curse in I.v - not graphed, no threats.

LANGUAGE CHANGE AND LANGUAGE RELATIONSHIPS

LANGUAGE EVOLUTION: ONE EVOLUTION THAT IS STILL TABOO

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Imagine a baby and your reaction after having looked at him for a while: you lift your eyes and look at the parents trying to see the source of a salient feature or a general resemblance with one them. If you are a horse breeder, take a horse that has had an exceptional career and you want it to breed a foal for you. If you are a winegrower and you have just tasted a superb wine, you want to have a cutting of the vine and plant it. Heredity is manifest in countless human reactions, and we have no problem accepting it. Evolution is another matter. It is not completely taboo, but we prefer to keep it at arm's length. Why the suspicion? Do we still harbor a subliminal sense of guilt for not believing in one of the components of a creationist religion in which we were brought up? do we think that ethics would be better upheld if a human : non-human caesura is postulated and evolution confined to the latter group? or are we afraid of losing the illusion of infinite freedom if what applies to bones is extended to behavior? Perhaps, as in multiple choice exams, the answer is "all of the above." But we are not here for soul searching; the question before us is this: is there evidence for language evolution and is there a scientific theory that can account for it? A prior survey of the history of evolutionary theories, both in biology and linguistics, will perhaps help us better to recognize and interpret the empirical data, and, by so doing, suggest an answer to our first question and a solution to the second.

1. Evolution in Biology

The increased acceptance of biological evolution by objective thinkers is common knowledge, but its initial phases were rather painful. In the seventeenth century, the Church, also known for its erring intransigence, condemned a French priest to die at the stake for having expressed the heretical idea that humans descended from apes. By the eighteenth century, mores had grown considerably softer and the authorities — spiritual and secular — could simply pressure the naturalists into taking a fixist position: the features of today's species are those that the Creator endowed them with.

Meanwhile palaeontologists were making interesting discoveries. Seeing that the remnants of extinct species are buried in geological strata that are separated by alluvial deposits, they concluded that the history of the earth had been punctuated by a series of catastrophes, of which Noah's flood would have been the last one. Since the cause of these periodic calamities could be assigned to Divine will, the catastrophist theory, of which the French anatomist Georges Cuvier (1769-1832) was the major proponent, could be integrated in the orthodox doctrine. The

empirical data were again reconciled with the teachings of the Church when it was observed by the progressionists that the fossils of the higher, and therefore more recent strata, belonged to more complex organisms, while those buried lower belonged to more primitive forms of life. It was claimed that the scalar distribution of fossils reflected a Divine plan: the Creator would return to the drawing board after each catastrophe and produce continuously upgraded organisms.

This catastrophist scenario and its attendant supernatural explanation generally endorsed on both sides of the Channel, were rejected by a group of English geologists headed by Charles Lyell (1797-1875). They opposed the recurrence of cataclysmic events and the recourse to Divine agency, though it was accepted that the original creation was the work of God. They advocated instead that nothing has taken place in the past that is not taking place right now under our eyes (cf. the subtitle of Lyell, 1830-33). This school of thought, which was called *uniformitarianism* because it claimed that the causes of change are uniform, had the merit of seeking natural explanations, but their dogmatic obstinacy in wanting to explain the past only with contemporary occurrences led them to deny both the geological history of the earth and the developmental sequence of living organisms.

For them and, especially, for Lyell, the leading exponent of uniformitarianism, the earth, once created, had entered an unending cycle of changes, whereby continents would periodically disappear under the eroding force of rivers and reappear as the debris carried into the oceans are subsequently raised above sea level. While the mountains yo-yoed in and out of the ocean, the living organisms moved around on a Ferris wheel — today's living organisms would become extinct, and those that are now extinct would return to populate the earth.

Then might those genera of animals return, of which the memorials are preserved in the ancient rocks of our continents. The huge iguanodon might reappear in the woods, and the ichthyosaur in the sea, while the pterodactyle might flit again through umbrageous groves of tree ferns (Lyell, 1830-33:1,123).

The style is superb, but the substance is simply ridiculous, and it was indeed ridiculed by De la Beche in a caricature (see fig. 1) depicting a returning ichthyosaur lecturing his peers on the fossil remains of extinct humans, which, according to Stephen Gould, today's leading evolutionist, is "a mordant dig from a classical progressionist at Lyell's view" (1988:323).

While the catastrophists and the uniformitarianists rejected and ridiculed each other's views, some insightful and unorthodox thinking was done by a French botanist, who started as a classificationist and became the world's first evolutionist. Jean-Baptiste Lamarck (1744-1829) was indeed the first one to replace the dogmatically-dictated concept of fixism with an empirically-supported theory of evolution, which argued that species were not created as such, but developed through a series of transformations, which produced ever-more complex organisms. The exact mechanisms that brought about these transformations were unknown at the time, and Lamarck assumed that adaptive characters deliberately acquired by individuals during their lifetime were organically transmitted to their offsprings. Molecular biology would eventually invalidate this explanation, but in the nineteenth century the inheritance of acquired characters was not the problem. What

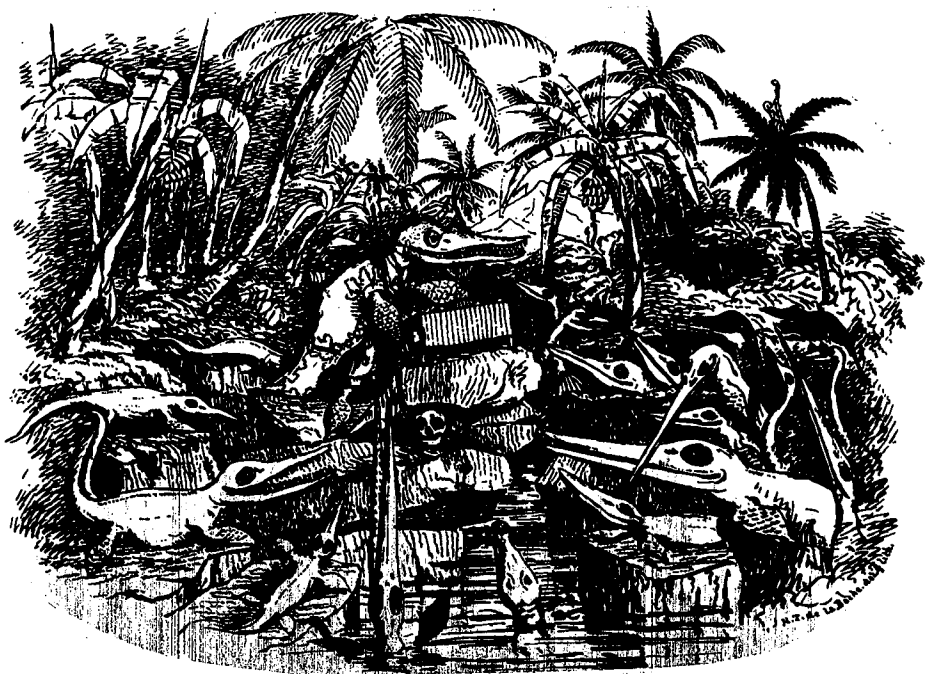


Figure 1. “You will once perceive,” continued Prof. Ichtyosaurus “that the skull before us belong to some of the lower order of animals” (Rudwick, 1975:539).

was controversial was transformism itself. Fortune favored the catastrophists, with Cuvier scoring high with the establishment, and Lamarck dying in poverty.

Transformism did not die however with Lamarck, some thirty years later, Darwin took over Lamarck’s ideas—transformism and inheritance of acquired characters—adding a population control device: those who had grown the adaptive characters and their progeny, who would inherit them, would survive better, while those who had failed to adopt would become threatened. This correlation between adaptation and survival would not only control population increases, but also guide the evolution of species. With the explanatory power provided by the natural selection principle, which agreed very well with the *Zeitgeist*, and perhaps with the help of aggressive evolutionists such as T.H. Huxley, the idea of evolution gradually prevailed, though it was not until the 1930s, when the evidence from molecular biology suggested that mutations are not produced by actively adaptive progenitors, but by uncontrolled events taking place at the cellular level during the activities surrounding fertilization, that it was set on solid scientific grounds. Lamarck’s transformism, supplemented with Darwin’s principle of natural selection, and adapted to our present understanding of genetic processes is now called the Synthetic Theory and is generally accepted by all biologists.

Indeed no one, outside the die-hearted creationists, disputes the evolution of species. We have swallowed our pride and revised or jettisoned our religions to accept the fact that a few million years ago we looked like apes, and, when we parted company with rodents, we were no better than a tree shrew. Today, the problem is elsewhere: we accept the notion of evolution, but we do not know what we should apply it to, because we do not know the limits of biology. I am not qualified to engage in a general debate over nature and nurture, and therefore I shall not pursue the matter further, though I shall return to discuss the biological correlates of speech and languages. The purpose of this part was to show how arduous the struggle toward a theory of evolution was in biology, and what the intermediate steps were. These may be useful to measure the progress in linguistics.

2. Attitudes in linguistics

Evolution in linguistics is often associated with Schleicher (1821-68) and immediately dismissed with some of the less felicitous parts of his conception. His enthusiasm for Darwin's theory and his nurturing the "fondest wish" that the "natural-sciences method" be used in linguistic research are well-known (1863/1873:6).

Unfortunately, the great German Indo-Europeanist could not fit all the linguistic data into a Darwinian scheme. He could see a developmental streak, since he assumed that primitive languages were spoken in telegraphic style and that increased complexity had gradually brought them to the level of the Indo-European grammar, whose inflectional nature was alleged to be the pinnacle of linguistic organization. Agglutinative morphology could also be fitted in as an intermediate state, but the historical trend away from inflections and the resulting isolative grammar of modern Indo-European languages could not be accommodated at all. The situation in linguistics began resembling the one once advocated in the natural sciences — fishes developed into humans and humans returned to fishes in an unending cycle, which, in Hutton's words, afforded "no vestige of a beginning, no prospect of an end." But since then Darwin had shown the fallacy the Ferris wheel approach.

There was only one recourse possible: As a nineteenth-century German intellectual, Schleicher turned to philosophy and found in Hegel's dialectic just the scheme he needed. Since the author of *The Phenomenology of the Mind* claimed that the three-way process swinging repeatedly from thesis to antithesis and thence to a higher-level synthesis, which in turn would become a new thesis triggering its own antithesis (see fig. 2), was not just a mental operation but the very method of the development of everything in the universe, Schleicher could explain the rise and fall of inflections and thence the evolution of languages with Hegel's periodic swing from thesis to antithesis and back to (syn)thesis.

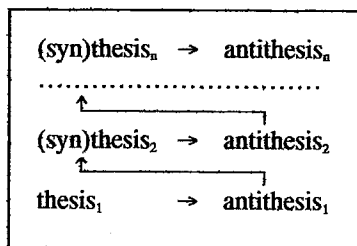


Figure 2. Hegel's dialectic

Though the loss of inflectional markers in the Indo-European languages could not be denied, its being interpreted as a negative development and a sign of decay, which of course pleased the nostalgics of "veneranda antiquitas," was challenged by a lonely, but insightful, Anglicist. Instead of seeing decay and course reversal, Jespersen argued that the historical data "enabled [him] to establish some definite tendencies of development and to find out the general direction of change." Since these tendencies were toward shorter and more regular forms less taxing for the memory and more functional in their use, the Danish linguist concluded that: "we have shown reasons for the conviction that this development has on the whole and in the main been a beneficial one, thus justifying us in speaking about 'progress in language'" (1922/1964:364).

There are of course limits to what original thinkers can advocate. Tinkering with the *communis opinio* is acceptable, especially when it is done with proper respect, but challenging the preconceived ideas of the establishment cannot be tolerated — Galileo's example being one in many. Jespersen's entertaining the thought that English, French, and Demotic Greek could have more advantageous features than Gothic, Latin, and Classical Greek was of course an act of heresy, and it was treated as such (cf. Engels, 1956; Gothic is not, of course, a direct ancestor of English, but a fair analogue).

While *progress* was a matter of appreciation that could be prevailed upon, the historical data were more difficult to dismiss. Meillet pointed out that there are a number of unidirectional changes that are common to all languages (1918/1965); Sapir observed that languages drift and that "linguistic drift has direction" (1921/1949:155); and, in a paper prepared for a plenary session of the 1939 CIPL conference, Giulio Bonfante pleaded that "le temps est venu, je crois, de commencer à esquisser une méthode qui nous permettrait d'établir les lois du développement progressif du langage humain" (1939:31).

Bonfante's plea was no doubt legitimate, but it was in a sense too early and in a sense too late. With the rise of structuralism the linguistic methods had changed and attention had been redirected. In Europe, where structuralism was cast in a phenomenological mold, Jakobson argued that changes were pendular, with linguistic systems shifting back and forth between equilibrium and imbalance (1931), while Martinet came to the conclusion that linguistic systems are the product of a tug-of-war between inertia and emphasis (1955:94 *et seq.*). Jakobson's and Martinet's dialectics differed from Hegel's on an essential point. Whereas the German philosopher proposed a model where the reverse movement led to a higher level, producing thereby a step on the evolutionary ladder, the disciples of the Prague School operated on a single level, excluding from their schemes all possibilities of accounting for developmental processes and thereby rejecting the notion of language evolution.

In the United States, where structuralism had a behaviorist tint, the focus was on observational data and the emphasis on their mechanical analysis, since mental operations were considered suspiciously subjective. This objectivist approach produced Swadesh's glottochronology and Greenberg's language-classification method, which he successfully applied to the vernaculars of Africa in the 1950s and

to the native American languages just a few years ago. While these are positive contributions and deserve to be recognized as such, one is also pressed to recognize that this is where the crisis was precipitated.

The reliability and the usefulness of a method prescribing descriptions and mathematical computations is not disputed here; what is questioned is the general adherence to a uniformitarian attitude, similar to the one that prevailed in England in the first half of the nineteenth century. Since Darwin, the natural sciences have shelved uniformitarianism, but mainstream linguists continue to think that the present directly reflects the past, and that linguistic research should be confined to what can be observed today. Bloomfield's conclusion that language change cannot be studied because he assumed that it cannot be observed directly, Chomsky's assumption that the grammar of English became coded in the human DNA in that fateful moment when *homo erectus* parents conceived the first *homo sapiens* baby, Bickerton's claim that the grammar of children born to pidgin-speaking parents is a pure-state realization of the structures of the ultimate protolanguage, and Merrit Ruhlen's wishful efforts to reconstruct items of the original lexicon by assembling a few modern speech sounds are all homologous manifestations of a common uniformitarian conception of language.

In the present discussion, I have amalgamated behavioristic structuralism and transformational grammar, not because the shift from corpus analysis to introspective investigation of grammatical judgement or MIT's move to complement description with "explanation" has gone unnoticed, but because both schools have built their respective theories on the exclusive study of what can be observed today, and Chomsky's "explanations" provide only a formal rationale minted out by a formal apparatus, which is also built exclusively with features that can be observed today.

It should be stressed once more that descriptive work and computational operations can make valuable contributions, and it is not my intention to underestimate them; what is questioned here is the claim that this is the only valid method and that everything that cannot be studied with this method either cannot be studied at all or simply does not exist. In this conjuncture, it may be instructive to recall that, while its determination to find objective answers was also praiseworthy, nineteenth-century uniformitarianism maneuvered itself into the unfortunate position of denying the geological history of the earth and the developmental sequence of living organisms. Though powerful in its days, this dogmatic distortion of the empirical data was doomed to meet History's unqualified condemnation. It came with Darwin's evolutionary theory.

The situation in linguistics today is uncomfortably analogous with the one in pre-Darwinian England, with mainstream scholars turning their eyes away from the development of linguistic implements. The existence of developmental sequences is either discretely pushed aside or categorically denied, either by shifting the attention to insignificant changes that are indeed cyclical or by finding far-fetched cases that are pressed into serving as counterexamples of developmental changes. Just as Galileo was told in no ambiguous terms that it is the earth that is at the center of the universe, we are told that languages do not evolve. Language evolu-

tion is simply taboo... but the facts are there, and some of us are recalling Galileo's remark, "e pur si muove," "and yet it does turn," which, when applied to languages, would become "and yet they do evolve."

3. Evidence for evolution in linguistics

The evidence for evolution is overwhelming, but it is fair to say that, while the developmental sequences are obvious and manifold, their general direction is not immediately apparent. We know, for instance, that languages shift from quantitative to qualitative vowel distinctions, from aspect to tense-dominated conjugational systems and from head-last to head-first syntactic structures. While here and there minor occasional reversals may occur, generally in bilingual situations, under natural circumstances massive and sustained moves in the opposite direction are not reported. The devil's advocate could point out that although the three changes are indeed unidirectional, the three directions seem distinct from one another, and the sequences may simply be in a chronological, and not in a developmental order. This is where a serious epistemological question arises. If A is regularly replaced by B, should we not ask ourselves whether a science can simply describe the regularity of the process and consider its job done, or whether it fully deserves its name only when it has recognized that it must also answer why it is that A is always replaced by B. My conception of a science is the latter, and I shall try to show why B replaces A, and, when I have done it, it will be clear, I hope, that it is not just a chronological order, but also a developmental one. But, first, let us survey a number of unidirectional changes.

The unidirectional changes exist in all languages (cf. Bichakjian, 1991), but those of the Indo-European family provide the best evidence because they have been more closely investigated over the longest span of time and because the reconstruction of their protolanguage rests on stronger probabilities. In these languages a good number of long range developments can be observed. The ancestral obstruents made predominantly of stops with secondary or even tertiary articulations have been replaced with symmetrically organized plain stops and fricatives. An emerging vowel system combining the front mid vowel with a number of laryngeals disappeared into a set of short and long vowels, which in turn gave way to more qualitative distinctions. Verbs went from modo-aspectual to predominantly temporal distinctions. Inflectional morphology has lost ground to word order and free morphemes, such as auxiliaries and personal pronouns, prepositions and articles, or adverbs. In syntax, ergative constructions have turned nominative, constructions with participles and other verbals have been replaced in many cases by subordinate clauses, which developed out of correlation, and finally head-last structures have been steadily reorganized into their symmetrical counterparts.

These changes may seem to belong to isolated and independent processes, just as in biology important mammalian features such as mammary glands, hair-covered skin, larger brain and internally-controlled body temperature seem random developments. On closer examination, however, these biological features appear to have an important characteristic in common: they are all adaptive. The unidi-

rectional changes observed in linguistics have the same common characteristic: they also are adaptive. Selective advantage may be difficult to show in linguistics, but it can be done.

If we observe the acquisition of linguistic features by children learning their native languages under normal circumstances, we quickly realize that the features of the ancestral languages are acquired rather late in childhood, whereas the features that have replaced them are acquired much earlier. Laryngeals were acquired late, whereas long vowels are mastered earlier, and additional qualitative distinctions, such as those provided by front rounded or back unrounded vowels, are acquired even earlier. Voiced stops and fricatives belong to the child's repertoire before ejectives and aspirates, respectively. Free morphemes and word order are commonly used before inflectional systems have stopped being a source of error — the precocious acquisition of an isolated regular case marker cannot change this overall chronology — and aspectual distinctions follow temporal ones. In syntax, sentence embedding is within closer reach than the use of verbals, and head-first structures are learned sooner than head-last ones, with the magnitude of the chronological difference being commensurate with the length of the modifier (cf. Bichakjian, 1988 for a discussion of these chronologies and for the supporting bibliographical references).

These psycholinguistic observations are of manifold importance. First, they provide a clear criterion for describing the direction of one-way changes. This is precisely what Meillet and Sapir were lacking. The former could only observe that languages have proceeded along common lines, while the latter could go no further than recognize a number of drifts charting the course of languages, but neither of them could reduce the various trends to a single process and describe it at a higher level of abstraction. Though language evolution is not a case of pathogenesis, one could observe analogically that Meillet and Sapir saw and described the symptoms, but they were unable to identify the disease. Jespersen had tried, by arguing that the modern features are shorter and more regular, and therefore more advantageous, but length and regularity proved to be elusive criteria. The chronology of acquisition provides instead a convenient gage and accurate data, showing that one-way changes proceed in the direction of ever-earlier acquired features.

This observation has the added advantage of applying to all languages. When, in the first half of this century or earlier, scholars pointed out that languages drift away from inflectional systems, it was often retorted that this process is characteristic of the Indo-European languages but not necessarily of other language families. The psycholinguistic criteria now eliminates this problem, and although considerable research remains to be done, the investigated languages clearly support the view that languages proceed in the direction of ever-earlier acquired features.

The universal application of the psycholinguistic criterion is also important because it suggests that, if it occurs everywhere, the shift to earlier acquired features must be an essential process, holding the key to our understanding of the problem. The key is indeed held by the word *earlier*, languages that are made of

early-acquired features provide their speakers with significant selective advantages. Since the mastery of speech sounds or syntactic strategies is achieved by laying out the corresponding neural pathways, the sooner this wiring is done, the stronger the networks are (cf. *mutatis mutandis* LeVay, Wiesel, and Hubel, 1980). Solid neural pathways are advantageous because they function better and offer greater resistance to fatigue, psychological disorders, and degenerative lesions. Earlier linguistic proficiency also fosters earlier acquisition of social skills. When it has an earlier start, social behavior is better established and more diversified. Finally, early linguistic proficiency is especially important for the individual's mental development. The sooner children can speak, the sooner they can expand the use of their intelligence and acquire new knowledge.

Early linguistic proficiency is therefore vitally important for humans, and the significant advantages in biological welfare and social and mental developments suggest that the shift to earlier acquired features could be an adaptive process guiding languages along their evolutionary course. The order of the unidirectional changes is not therefore just chronological, but it is indeed developmental, since it proceeds in the direction of ever-greater selective advantages. The ones that were stressed here are those that are derived from early acquisition. One could also argue that incoming items are more functional than outgoing ones. Plain stops and fricatives do not have the distributional constraints of complex consonants, independent particles combine more freely than inflectional markers, embedded sentences have a greater syntactic potential than participial phrases, but these functional advantages, however real and important, are not stressed here because a universal gage of functionality remains wanting.

The shift to earlier-acquired features can be objectively determined with such a yardstick, and the observation is heuristically important. Like any other type of learning, language acquisition is a matter of linking neurons into pathways that, when innervated will prompt the appropriate peripheral organ into action and have it produce the targeted linguistic feature. The synaptic connections that are necessary for these networks must be made during the plasticity period of the linguistic areas of the brain. Since the biochemical processes that initiate, sustain and inhibit the plasticity condition are genetically controlled (cf. Aoki and Siekevitz, 1988), it would be in line with biological reasoning to surmise that the evolution of languages is produced by a retiming of the regulatory genes that control linguistic plasticity. After all, it is the same retiming process for similar adaptive reasons that is advocated to account for the evolution of human morphology and ethology (cf. Gould, 1977:365 and Lorenz, 1971:180).

After proposing this biolinguistic hypothesis from a linguist's vantage point (for the latest presentation, see Bichakjian, 1992), I was comforted to see that independent research in the medical sciences has led Russell Gardner to conclude "that we must find genetic blueprints underlying language production, that is, DNA sequences that allow human children to learn language and then to foster its continued use. We need to search for DNA sequences that when modified in turn modify language production" (1991:2). While the call for such an orientation of molecular research provides my genetic approach with methodological support, a

recent study of Indo-European populations and their languages has yielded an observation that may become corroborating evidence. Robert Sokal and his associates who compared genetic and linguistic distance have come to the conclusion that "the remaining significant partial correlation between language and genetics, after geography is held constant, indicates a relation between these two variables above and beyond that caused by their common spatial differentiation" (1992: 7671; see also Roberts, 1992). Of course, Gardner's remarks and Sokal *et al.*'s findings do not provide the required molecular evidence, but, given their biological vantage points, they do give credence to the idea that the search for an explanation of language evolution must be extended to genetics and attendant fields of research.

4. Simply human

In its parochial pursuits, mainstream linguistics continues to be haunted by uniformitarian demons, but the evidence is unequivocal: language evolution does take place, and the foregoing has shown that we can accurately describe its course, surmise the probable biological process that brings it about, and explain its rationale. Similar in essence to the evolution of human body and behavior, and susceptible of scientific analysis, language evolution deserves to be freed from the taboo that has been pronounced against it. After all, language evolution is simply human.

REFERENCES

- AOKI, CHIYE AND PHILIP SIEKEVITZ. 1988. "Plasticity in Brain Development." *Scientific American* 259, 6 (December). 34-42.
- BICHAKJIAN, BERNARD H. 1988. *Evolution in Language*. Ann Arbor, MI: Karoma.
- . 1991. "Evolutionary Patterns in Linguistics." *Studies in Language Origins, II*. Eds. Walburga von Raffler-Engel and Jan Wind. Amsterdam: Benjamins, pp. 187-224.
- . 1992. "Language Evolution: Evidence from Historical Linguistics." *Language Origin: A Multidisciplinary Approach*. Eds. Jan Wind, Bernard H. Bichakjian, Alberto Nocentini, and Brunetto Chiarelli. Dordrecht, The Netherlands: Kluwer, pp. 507-26.
- BONFANTE, GIULIANO. 1939. "Les lois du développement linguistique." *Réponses au Questionnaire (suite) du Cinquième Congrès International des Linguistes*, Bruxelles, 1939. Bruges: Imprimerie Sainte Catherine, pp. 31-32.
- ENGELS, J. 1956. "Y a-t-il du progrès dans la langue?" *Neophilologus* 40.242-49.
- GARDNER, RUSSELL, Jr. Forthcoming. "Are there Language-Regulating Genes on Chromosome 15?" *Studies in Language Origins, IV*. Ed. Edward Callary. Amsterdam: Benjamins.
- GOULD, STEPHEN J. 1977. *Ontogeny and Phylogeny*. Cambridge, MA: The Belknap press of Harvard Univ. Press.
- . 1988. "On Replacing the Idea of Progress with an Operational Notion of Directionality." *Evolutionary Progress?* Ed. Matthew H. Nitecki. Chicago: The Univ. Press, pp. 319-38.
- IAKOBSON, ROMAN. 1931. "Prinzipien der historischen Phonologie." *Travaux du Cercle Linguistique de Prague* 4.247-67 [rev. and tr. into French in N.S. Troubetzkoy. 1964. *Principes de Phonologie*. Tr. Jean Cantinneau. Paris: Klincksieck, pp. 315-36].
- JESPERSEN, OTTO. 1964. *Language: Its Nature, Development, and Origin*. New York: Norton [first published in 1922. London: Allen and Unwin; New York: Holt].

- LEVAY, SIMON, TORSTEN N. WIESEL, & DAVID H. HUBEL. 1980. "The Development of Ocular Dominance Columns in Normal and Visually Deprived Monkeys". *The J. of Comp. Neurology* 191.1-51.
- LORENZ, KONRAD. 1971. *Studies in Animal and Human Behaviour*. Vol. 2. Tr. Robert Martin. London: Methuen.
- LYELL, CHARLES. 1830-33. *Principles of Geology, being an attempt to explain the changes of the earth, by reference to causes now in operation*. 3 vols. London: Murray.
- MEILLET, ANTOINE. 1965. "Convergences des développements linguistiques." *Linguistique historique et linguistique générale*. 2nd ed. Paris: Champion, pp. 61-75 [first publ. in *Revue Philosophique* 85 (1918)].
- ROBERTS, LESLIE. 1992. "Using Genes to Track Down Indo-European Migrations." *Science* 257.1346.
- RUDWICK, MARTIN J.S. 1975. "Caricature as a Source for the History of Science: De la Beche's Anti-Lyellian Sketches of 1831." *Isis* 66.534-60.
- SAPIR, EDWARD. 1949. *Language: An Introduction to the Study of Speech*. New York: Harcourt, Brace and World [first published in 1921].
- SCHLEICHER, AUGUST. 1873. *Die Darwinsche Theorie und die Sprachwissenschaft*. 2nd. ed. Weimar: Böhlau [first published in 1863].
- SOKAL, ROBERT R., NEAL L. ODEN, AND BARBARA A. THOMSON. 1992. "Origins of the Indo-Europeans: Genetic Evidence." *Proceedings of the National Academy of Sciences of the United States of America* 89.7669-73.

A NEW ENGLISH OR A NEW ITALIAN?

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Linguistic immigration appears to revitalize languages just as the movement of peoples enlivens races. My study proposes to examine the impact of the English language on Italian and vice versa. It is an attempt to evaluate just how much each of the two cultures owes the other in their means of expression. The heritage of both languages has been enriched by the crossing of linguistic barriers and to trace the mode of entry of loanwords and their process of assimilation is to approach a socio-historical analysis of the two linguistic cultures. Three hypotheses are postulated:

- 1) Loan assimilation, a form of speech behavior, is empirically systematic, ruled as it is by underlying language constraints.
- 2) Investigation into the historical time context of loanwords will uncover the forces that lie behind language change.
- 3) The fluidity of language change will never allow for definitive conclusions because people react differently through time.

Comparable to the invasion of Latin during the conquests of the Romans throughout the prime of the Empire, and to the penetration of French with the Norman conquest, the pendulum swings once again toward the language of power, with English asserting itself in outposts throughout the world.

Italy is one of the countries which has fallen prey to the advance. A few activist purists within the Italian Crusca Language Academy have formed committees aiming to set modern Italian speakers back on the good old track, and thus put an end to the current appalling popular linguistic behavior. These wishful thinkers, obsessed by modern-day metaphysics, do not realize it is a lost battle. Morphological, phonetic, semantic and linguistic gender changes have permeated such a wide spectrum of the population that backstepping is out of the question. In a way, English is simply rendering to its nearest descendants, the favor of having borrowed thousands of words from Latin over roughly four centuries.

New words always reflect some form of human contact, either physically or via mechanical inventions, radio waves or TV satellite, but we seldom realize how important a role context plays in the meanings assigned each new entry. In this connection, Jean Aitchison (1981) remarks:

"Traditionally, scholars concerned themselves with describing sound changes as they unrolled through the ages. In this, they paid relatively little attention to changes currently taking place, or to the sociolinguistic and psycholinguistic factors which underlie many alterations."

Social events, discoveries, inventions and people may lend themselves

to acts of linguistic donation. War will greatly hasten the pace of language influx due to the ensuing clash of interests.

In the initial confrontation stage, when foreign words are distinctly perceived as alien, if the speaker-receiver is politically or ideologically antagonistic to the culture of the linguistic newcomer, the borrower will not attempt assimilation strategies. The linguistic heritage of the Nazi Germans in Italy during World War II has more or less maintained its initial phase of entry. Very few harsh-sounding words remain, pronounced with imitative disdainful zest: *Achtung! Alt! Ja!* On the contrary, the language of the welcome liberator was immediately adopted and adapted to the Italian ear. The use of English terminology became a sign of the social acceptability of the victor, and of social intellectual status within the host population. Even those who learned "Yankee, go home" also learned the myriad other expressions, from "ciuin gomma" (chewing gum) and "sigarette Camel" to "I love you, kiss, hello and goodbye." And the warmer the welcome, the faster is the process of assimilation.

With the world-wide spread of English, a series of so-called "New Englishes" have sprung up. In order to be considered a new variety of English, Platt et al. (1984) maintain that the following criteria be applied:

- a) development through the educational system, it being taught as a school subject;
- b) development in an area where English is not the native language of the population;
- c) it is used for a range of functions among those who speak or write it;
- d) it becomes localized or nativized by adopting features of its own: sounds, intonation patterns, sentence structures, words or expressions.

If these were the only requirements, Italian could readily deserve a "New English" status of its own. Although it is not yet the language in which education is generally imparted, in the fall of 1992 a course in English will become practically obligatory for the majority of elementary school children nationwide. It is already taught in all the other educational institutions, and is mandatory for practically all university students. Typically taught by native Italian teachers, themselves graduates of Italian universities, the English these students acquire is already modified as to pronunciation, and tends to follow a close Italian translation word order. English presently acts as a *lingua franca* in most fields of research, in business, especially in connection with the hotel, restaurant and resort services, and at the numerous international meetings and trade fairs held daily all over the country.

There are also valid arguments for the linguistic phenomenon being termed a form of pidgin English because those who speak it were often not taught to do so. It has developed in order to communicate, and its development is in continual flux. What is noteworthy is that it is used to communicate not necessarily with native English speakers, but more typically with native Italian speakers. Making due allowance for rural areas, English language newspapers, books and magazines are available everywhere. That the variety has become nativized is instantly

obvious upon scanning any daily Italian newspaper where article titles such as the following meet the eye:

- a) La spy story alla romana -La Nazione, May 31, 1992
- b) Fermati due detective -La Nazione, May 31, 1992
- c) Trasporti in tilt -La Nazione, May 31, 1992
- d) Segni for president -La Nazione, June 7, 1992
- e) Beffa hard core -La Nazione tabloid, Oct. 18, 1990
- f) Era nel cast di Dallas:
Uno Ewing sieropositivo - La Nazione, Oct. 3, 1991
- g) Un weekend 'sweet and soul'
per ricordare Redding -Il Giornale, July 17, 1992

Italian popular songs have undergone such copious English language infiltrations that they have been termed "almost bilingual" by some scholars. (Klayn, 1972). The following will probably suffice:

I sing amore, Do you capire oppure no?

Amor mio, good night... te ne vai, good-bye.

My wonderful bambina, My funny piccolina, My lucky star.

English nomenclature has become an integral part of the film industry, TV and modern music. The abundant use of English terminology in business, as Klayn writes, "creates a snobbish attraction for Italian clients." The following publicity banner can be seen today when passing down a main avenue in Florence :

CASUAL CLUB
WOOL AND COTTON SPORTSWEAR
SANTOMIO
TOTAL QUALITY

where the only Italian word is the company name.

Fending for themselves within the host language framework, loanwords will typically undergo phonological adjustments that may or may not lead to orthographic changes, and morphological accommodations may be performed for easier acceptance. At times, in the flurry of quick initiation, the semantic domain of the original term will be shifted, widened or restricted to suit the single case.

The degree of transplantation of English into Italian can best be witnessed in the hybrid terms that have mushroomed in virtually every field. New "baby" compounds appear almost daily: PENSIONATI-BABY (people in their 30's who retire with a pension); PROSTITUTE-BABY (adolescent-age prostitutes, Italian feminine plural); BABY-RAPINATORI (18-20 year old thieves) and many more. Other favorite "compounders" are KILLER, SHOW and STORY. Innovative blends are frequent, such as: HOBBYLANA, HOBBYCUCITO and HOBBYLEGNO (shops where knitting yarn, sewing materials, and woodcraft goods are sold); VIACARD and SANICARD are Italian credit cards, one specifically for highway tolls, the other for private medical care.

The next neologistic step is already in progress. Italian speakers no longer need to rely on an Italian word-crutch for basic meaning support; new expressions are coined with English items alone. The word FOOTING, an easy term to grasp, has been coined instead of borrowing the original concept-word, JOGGING, which bears no association value; parking garage signs of FREE are immediately

understood to signify that vacant spaces are still available, carrying no connotations of a lack of price whatever. And burgeoning everywhere are compounds, unknown in mono-English-speaking countries, of the type: SHOES HOUSE, BEAUTY SALOON (salon is not perceived as truly English), SUGAR BLUES ALIMENTARI (grocery store), and BABY MARKET (a store where toys, not children, are sold). Thus, an Italian-English variety of its very own is in the making which, in the future, could return to its native English soil duly recognized as an alternative form. Upon further investigation, it will probably be more appropriate to name the phenomenon as a European-English variety.

The great characteristic feature of New Englishes, the lack of marking nouns for the plural, is also true for Italian speakers; the reason being, of course, that many background languages have no word-final consonant clusters. In Italian, too, the tendency is to generalize any plural -s to the voiceless sibilant /s/, as in FANS. In contrast to the dropping of noun plural markings, New Englishes will sometimes place the plural mark where established English varieties do not (Platt et al.). Such overgeneralization is the case for the frequent use by Italian speakers of: INFORMATIONS, WORKS (in progress), FURNITURES, for their countableness has been transferred from the background language.

Just as in the New English spoken in Singapore, Sri Lanka and some parts of India, the æ/ɛ distinction typically fuses into /ɛ/ for Italian speakers of English, too (i.e. wrap [ræp > rɛ p]). Another phonetic feature in common with Platt's New Englishes is that of "a definite tendency to avoid central vowels," replacing them with front or back vowels. Thus, like African Englishes, /ɜ/ will alternate between [a/ɛ/ɔ], as for BURN, WORK, WORLD, WORD.

Furthermore, as noted by Platt et al. in the New Englishes of India, Sri Lanka, Hong Kong, Singapore, Malay, Africa and Papua New Guinea, several of the phonetic diphthongs in English such as those present in TO [tuw/tyu] and UNION [yunya n], will typically omit the glide element and shorten to single vowels. The same phenomenon holds true for Italian speakers of English. Moreover, the typically Italian absence of distinction between /I/ and /i/ (THIS/THESE) falls into the overall New English tendency not to distinguish between tense and lax vowels, referred to by some as long and short. This is comprehensible since a lax high front vowel is not present in the Italian vowel inventory, and the same probably holds true for the other New Englishes considered.

Other New English similarities consist in the fricative th-sound substitutes: /s/z/t/d/ for /θ/ or /ð/, all pronounced in roughly a similar mouth and tongue position. Aspiration-reduction is generally an Italian trait, too, in keeping with other New Englishes, e.g. (h)air, (h)as, (h)igh; and lack of /p/t/k/ aspiration is the rule. However, aspiration-affixation may also occur, as for (h)eat, (h)it. Final -ed verb past tense or adjectival forms pronounced /t/ are regularly overgeneralized to /d/, examples being DÉVELOPED, WRAPPED, SHAPED, PUSHED, pronounced with an extra syllable. Another mutual lack of distinction is that of /l/ of WORLD which will often be silent, making it sound like WORD, pulling the middle-mouthed /ɜ/ back to open o /ɔ/. Moreover,

a widespread strategy, Platt et al. note, is to pronounce only one consonant of a group of two, and one to two of a group of three. Italians, too, are wont to reduce most three-consonant final -sts clusters, like TOURISTS, to a single consonant [tʊrɪs].

Jespersen (1922) had observed that sound substitution as the result of race-mixture and of conquest do not produce radical changes. Indeed, although certain phonetic rules have changed from Old English times, others have persevered: English /iu/ shifted to /yu/ under the influence of French, but the final diphthong quality of English has persevered, hence such French "invaders" as BOUQUET /ey/ and BEAU /ow/, have themselves undergone final diphthongization. An Italian speaker, whose native vocabulary is basically dissyllabic of the CVCV type (consonant + vowel), when confronted with polysyllabic English vocabulary, will not only tend to omit final consonants, but will typically continue to pronounce all syllables with equal weight, thus failing to 'time' accent weighting according to utterance rhythms. On the other hand, the English speaker, apart from traditionally preferring to stress first syllables, is prone to lighten syllables, and will continue to do so by pronouncing the loaned sounds in a position of least resistance and of least effort, that is, at the middle of the mouth. Thus, the catch-all schwa phoneme continues to dominate the Modern English language scene, following the general tendency of Middle English unstressed vowels to be replaced by the schwa in Modern English words ending in -ion and -ious, such as NATION and PRECIOUS, reducing their light syllables to the single /ə/ schwa vowel plus the final consonant. Accustomed to 'lighter' speech units, the English speaker is wont to treat foreign imports in the same 'light' manner. Consonant geminals are reduced to the single element (pizza), and high, taut, decidedly front or decidedly back 'foreign-sounding' vowels lose tautness, fall lower, and slide in towards the middle of the mouth into schwa territory. In apposition to this, Italian speakers will force the weak (lax) unknown vowels /ʊ/ and /ɪ/ to turn into strong (tense) vowels /u/ and /i/, while the likewise unfamiliar /ae/ will typically move further back in the mouth to amalgamate with strong /a/. Thus, whatever the degree of imitation intended by the speaker, the underlying phonological, morphological, syntactic and prosodic rules of the host language will invariably act as cathodic rods of attraction, pulling on the variant speech units to conform with the rest. This is the reason why most assimilated loanwords become so well-camouflaged that their foreign origins are unrecognizable by the user.

The fact thus emerges that the tendency of the Italian speaker to strengthen English vowels, often reported as lengthening, is the reverse of what took place in Middle English when the final -e was lost under the influence of the Francophile trend, which was to weaken all unstressed vowels. The insatiable presence of the schwa is proof that the phenomenon is still in force. It may be said, then, that the Italians' pronunciation of English loans today, by and large, reverts back to how English syllables were pronounced by the speakers of Old English. And since middle-of-the-mouth sound positions are a total novelty for Italian speakers, attempts at schwa reproduction move frontward to /ɛ/, while the combination /aʊ/ disjoins into two distinct

phonemes: /ɛ/+r/ in word-final position.

The Italian-produced candy bar RAIDER is a play on the pronunciation spelling of RIDER and the English semantic connotator RAIDER. It is pronounced as English RIDER on TV and at the corner "bar." An easy concept, picked up from the film 'Easy Rider,' it is an audible term that has been acquired as any native term would get stored in one's memory. The original semantic value of orthographic RAIDER, less familiar, has not been generally grasped, and thus there is no discrepancy with those Italians who are not versed in English, to have two spellings for one concept.

So what do we have? An Italian-based English creole or an English-based Italian creole? A New Italian or a New English? Despite all the above, the Italian-style English spoken in Italy has no second language status, for which reason Platt et al. would rule out the existence of an Italian New English. A case probably stands for present-day Italian being defined as a creole Anglo-Italian language, as it has already surpassed the pidgin stage, for children are born into it daily and they learn English words along with Italian basics. I have heard one 5-year old say to his mother: "Voglio chicken oggi." One of the first take-home pictures of a kindergarten child bears the following title: "gioco col compiute." The diphthong [yu] which the little girl transcribed as "iu" is clearly a pronunciation spelling of COMPUTER, wholly in keeping with the underlying phonological tendency for Italian speakers to avoid the release of final consonants. The translations of the English language films and endless TV serials and animated cartoons contain so many inaccuracies that Italian has become a special parallel version of Italo-American English: ATTITUDE regularly translates into its false cognate ATTITUDINE instead of proper ATTEGGIAMENTO; to SPONSOR has quickly nativized to SPONSORIZZARE, shoving Italian PATROCINARE completely out of the picture; TESTS simply turn into TESTI instead of PROVE or ESAMI, and from there neologisms have quickly taken root, such as the verb TESTARE and adjective TESTATO. A mixing of audio-visual aids together with invisible semantic mergers is bringing about a truly hybrid Anglicized Italian, not to be confused with immigrant English for several reasons:

- 1) it is by no means a temporary phenomenon, for it has been developing since the 1940s;
- 2) the language variety gains ground daily;
- 3) the type of vocabulary involved is not of the survival type, but rather of the extraneous, non-essential kind; and
- 4) the degree of creativity in re-generation of word stock far surpasses Italian immigrant language ingenuity.

Perhaps the same might be said for the Italians, as Platt et al. write about the Philippine attitude toward English: "a little bit for everyone" is considered a good thing, but a lot of English is for a select few; and as in Tanzania and Zambia, those who speak English "consider themselves elite," for knowing English carries connotations of education and high socio-economic status. Therefore, parents instill its importance into their children as an opportunity for better-paid jobs in their future.

In a little dictionary, Angelo Rastelli (1985) collected 600 Anglo-Saxon borrowings in common Italian usage. His observation was, given that the daily vocabulary of Italians amounts to roughly less than a thousand words, his collection signifies that millions of Italians use English in their daily talk, unaware of knowing English. This fact leads Rastelli to deduce that one half of all Italians probably have a knowledge of English not inferior to that of the average New York taxi driver. Of the 216 "H" and "W" lexical items in the New 1988 Zingarelli Italian language dictionary, over half (113) are of English origin. Allowing for "H" and "W" items not being a representative category for Italian, the fact remains that, although the majority of Italians cannot read English, the population does acquire it primarily through sound, as children do.

And just as the language acquisition of children occurs on a nominal basis, likewise most loanwords fill the nominal slot. Jespersen had noted how there is a greater inclination to borrow "full" words, such as nouns and adjectives, rather than "empty" words such as pronouns, prepositions, conjunctions and auxiliary verbs. Exceptions to any rule may naturally be found, and there are two prepositions which have been borrowed, one from each language. Latin/Italian *PER* is used in English, and the preposition *IN* is common to both languages. However, suprasegmentalized *IN* is an English loan, which demonstrates the importance of suprasegmental features. With a change in emphasis as the only difference, the oft-pronounced Italian item is understood by all in its Anglo-derived adjectival sense. In the following sentence: "*E' molto in fare lo shopping al super,*" emphasis alone, that is, unusual stress accompanied by a change of intonation, has functioned as a meaningful unit, transforming the Italian preposition into an anglicized adjective. Thus a neutral native lexeme has turned into a sememe loaded with anaphoric meaning.

Examination of the assignment of gender to borrowed nouns, shows that the single outstanding factor is number. The vast majority of loaned nouns assigned a masculine gender bear witness to the exaltation of masculinity worldwide. Once again, gender and power walk hand in hand, bearing further evidence toward a politics of gender. It is the feminine class that carries the stigma of markedness, while to be masculine signifies the norm. This is not a surprising finding since the more comprehensive sex is that of the male, 'man' and 'he' generally used as generic expressions. The data agree with a 1981 study by Poplack and Pousada of gender assignment recorded in the speech of 16 Puerto Rican children in New York City. The study shows that factors governing gender assignment are language-specific, and that once a gender is assigned by whatever criteria, there is generally unanimous agreement on its usage among speakers. A comparative analysis of gender-assignment of the same loanwords in different languages should shed light on the criteria followed in the process, especially when the genders appear similar cross-linguistically.

Although far less invasive than Latin, several Italian concepts have left a lasting imprint on English. Dante's *inferno* gave Hell a new visual dimension that still continues; Boccaccio gave the art of story-

telling a canonized genre; Petrarch's sonnets introduced a manner of verse; the commedia dell'arte marked a cornerstone in acting; Machiavelli's rendition of the context around the word STATE deprived it of its medieval garb, even if it did not entirely extend to today's meaning. Important longlasting contributions to the English language are: BANK, BANKRUPT, BALANCE, CASH, CASHIER, which reflect the extensive trade network in existence in Italy in the 15th and 16th centuries, and they also reflect the social superiority of the Italian language in that particular historical context. VILLAIN, presently signifying 'evil one,' started out as a dweller of the VILLA, then passed to worker for the VILLA owner before reaching its present stage. Two other Italian concept terms have strong long-life possibilities in English. The century-old MAFIA entered English with reference to a localized politico-criminal organization. However, it has since crossed semantic borderlines and now envelops any world-wide illicit organization, and, more recently, even extends to small groups that are not necessarily of a criminal nature. The second term FASCISM (from FASCISMO), relative to a political movement, was first applied exclusively to the time of Mussolini. It, too, has generalized into any type of dictatorial conduct and has generated derived forms: FASCIST, FASCISTIC, FASCISTICALLY, FASCISTIZE, FASCISTIZATION. Further proof of the ability of English to adopt and adapt, blend and create are the following: CONFETTI has turned from Italian hard candy into flighty paper pieces; GLITTERATI is a recent innovative hybrid blend (glitter+literati) used in snide reference to the typical group of people who attended a European film festival. In BOCCI BALL TOURNAMENT, BOCCI turns adjectival and is rather redundant since it already stands for the plural of ball. The name of the "CUCINA PIAZZA" restaurant in Kohler, Wisc., makes no sense whatever in Italian, yet it does convey the concept of a place where Italian-style food is served.

In the field of music, Italian played the lead role of vocabulary exporter for well over 4 centuries. The use of musical terminology, never well assimilated into English, always confers an aura of superior knowledge: aria, maestro, recitativo, oratorio, lentissimo etc. Nonetheless, virtuosos like Paganini or singers like Gigli or Pavarotti, except for the duration of the concerts, have not exercised any lasting sociolinguistic effect on the Anglo scene in general. Although Rita Hayworth sang a song that intermixed Italian and English, "Amore mio, love me forever," in the past five decades the musical loan trend has definitely shifted, now moving from the Atlantic to the Mediterranean. It is indeed amazing how music, not a 'serious' subject in the educational systems of the cultures under examination, nevertheless plays a basic social role in the phenomenon of linguistic loans. The strong impact of American jazz earlier, but especially rock and roll music, has radically changed the entire way of life of Italy's young people: an influence that carries English into every Italian household, dragging with it incontestable cultural and commercial ramifications.

Thus, the donor-receiver relationship of linguistic borrowings

can by no means be considered a passive affiliation. The process involves a more or less conscious act of donation which is acknowledged through active public acceptance. The necessity for naming new objects, efforts to widen one's conceptual horizons, or a desire for emulation, even dissension, are all factors that decide why certain imports take root while others are quickly dispersed. Let us suppose that the Austronesian language of the Island of Sumatra possessed all the new vocabulary concepts of present-day English. How many people, world-wide, do you think would prefer the Malay linguistic items to the English terms? Since the Island of Sumatra carries little political weight in the world today, people have no incentive to borrow from a language whose country bears no particular world prestige. Again, Jespersen noted that loanwords are taken from languages that are deemed fashionable. So it may safely be affirmed that vocabulary choice is unconsciously power-initiated, in the interests of social status. Clearly, the expectations of certain effects, together with group comprehension, are closely bound to word usage; a fact which fully justifies Greenberg's (1971) claim that linguistics should be considered a behavioral science.

Peer imitation is evident in the borrowing of semantic synonyms of terms already existent in the native lexicon. The underlying social nature of loanwords forces us to consider the historical time-context of the items borrowed. A diachronic socio-linguistic evaluation, therefore, becomes necessary to help explain the factors which prompt people to cross cultural barriers in search of new vocabulary items, whereas a synchronic analysis will explain linguistically descriptive changes. When no new concept or article is being introduced, then the linguistic item borrowed probably stems from the same type of desire that gives rise to slang: a desire to be differentiated from an imposed social milieu while claiming to pertain to another. How things are expressed becomes of more importance than what is actually being said. A shared cultural knowledge leads to a conscious adoption of linguistic usage which may convey judgemental considerations, since definite points of view can lurk beneath the surface representation. Even on a world basis, the importance of group identity, the desire to belong to one group rather than to another, can enter into play. Basically, it is a psycholinguistic form of "keeping up with the Joneses." The conscious use of loanwords creates social stratification whenever such use is applied as a sign of cosmopolitanism, or as a way of externalizing non-racism in noblesse oblige style. Akin to the use of genteelisms, which one substituted for ordinary words in order to appear less plebian, new terminology will no longer attract attention with widespread use. Hence, the need to keep ahead of the crowd by adding an ever greater number of new lexical items. Strunk's (1979) comment about writers who borrow from foreign languages was that they did so "to show off." IMPRESARIONESS, which appeared in the local weekly, Milwaukee's Downtown Edition (Sept.2, 1991), is an outstanding example of linguistic ostentation. By feminizing the Italian masculine ending, the reporter has evoked an implicit sign of cultural superiority for the writer, as well as for the language of origin. The article title: "Keeping up with the Medici" (Investment Vision Magazine,

Sept/Oct 1990) is a further example.

Labov (1979) has pointed out how social values are attributed to linguistic rules only when there is variation. When a form "becomes universal, the social value attached to it disappears." Applied to loanwords, the same proves true; when they are in the process of assimilation, their habitat is in the *parole*. Once assimilated, they move into the *langue* and are thus unmarked. Some expressions, usually of a technical type, may remain in the *parole* limbo for centuries. When in the *langue*, factors which determine their use will probably be either age of the speaker or field of interest. As already alluded to, an excellent historical demonstration of how general reaction to loanword introduction influenced social stratificational structures, is what happened to English after the Norman conquest. When French became the language of the Court, the lower middle classes gradually became acquainted with it; and by interspersing their speech with French terminology, they initiated a linguistically-based type of social division.

In contemporary Italy, as in numerous other countries, the interspersing of English terminology serves as a sign of social status. Loanwords represent linguistic symbols reflecting speaker attitudes and values, and thereby fostering social as well as linguistic change. Perhaps we have here a safe haven for Whorf's hypothesis of postulating the decisive role of language in determining cultural patterns. Initial introduction plants the seed of adoption, but it is only through repeated reinforcement that true acculturation is fostered. Since language cannot generate in a vacuum, but needs a framed context for meaning to occur, today's media provide visual aids that complement and justify alien-sounding names, social events, holidays etc. Dallas, J.R., the Ewings, Capitol, Beautiful (soap operas), barbecue, picnic, Disneyland, MacDonald's, etc., have become familiar Italian household terms, with extra-linguistic influences playing as important a rôle as intra-linguistic restraints.

Much as Pike's tagmemes, where the units-in-context extend upwards to discourses, which are themselves embedded into still larger units, it may be posited that there can be no borrowing out of context. What Pike stipulates in reference to linguistic description in general, ideally suits linguistic borrowings, for their description MUST "include an adequate relating of material to its context." The entire macro-event needs to be accounted for in order to have a complete understanding of the term. Thus, every single loanword may truly be considered a vehicle of culture movement, bearing messages across national barriers. When the number of words adopted becomes so rampant and constant that it is impossible to keep count of their entry, then a real cultural invasion has taken place. The items have singly combined to form a pattern of culture that was unfamiliar before. At this stage, the single units, no longer quaint novelties, form a conglomerate capable of exercising pressure on the opinions of the community. At first, the members are expected to understand the expressions in their correct settings, and later, to use the expressions themselves. Certainly, those who use the "new" vocabulary with the greatest frequency are all the more respected for it. Productive adoption has become a source of prestige for the user and of being "in"

(formerly *à la page*) for the listener. The New Italian or New English, depending on which way one considers the phenomenon, has become a matter of better social acceptability. Like a chain, each member's desire to acquire proficiency in the "new" idiom, acts as another link which reinforces the whole into a pattern that becomes a goal for entire groups in the various social strata of the nation as a whole. In practice, word choice has become a symbol of merit fixed to the notion of status.

In conclusion, then, can the process of loanword adaptation safely be considered a mini-demonstration of linguistic change in general? We already know that languages recreate new utterances within a rule-governed framework. If a sound is unfamiliar, the language chisels the new discrete sound segment to a size that will fit its characteristic structure. Loan assimilation, a special form of speech behavior, has been seen to be empirically systematic, ruled as it is by underlying host language constraints. Further investigation into the etymological history of loanwords will better explain their role in the language of the present. The psycholinguistic implications in the pragmatics of language use are virtually unexplored in this field. Examination of the contemporary status of loanword adaptation should put into better perspective both the social and the linguistic forces that lie behind language change. Finally, of the three initial hypotheses, the most steadfast remains the last: the fluidity of language change will never allow definitive conclusions to be drawn, because events and time cause people to react differently.

WORKS CITED

- Aitchison, Jean. 1981. Language Change: Progress or Decay? London: Fontana Press.
- Greenberg, Joseph H. 1971. Language and Linguistics. In Language, culture, and Communication. Essays by J.H. Greenberg selected and introduced by Anwar S.Dil. Stanford, CA: Stanford University Press.
- Jespersen, Otto. 1922. Language: Its Nature, Development and Origin. London: Geo. Allen & Unwin.
- Klajn, Ivan. 1972. Influssi Inglesi nella Lingua Italiana. Firenze: Leo S. Olschki Editore.
- Labov, William. 1979. The Study of Language in its Social Context. In Language and Social Context, Pier Paolo Giglioli, ed. New York: Penguin Books.
- Platt, John; Heidi Weber, and Ho Mian Lian. 1984. The New Englishes. London: Routledge & Kegan Paul.
- Poplack, Shana and Alicia Pousada. 1981. A Comparative Study of Gender Assignment to Borrowed Nouns. CENTRO Papers 10. City Univ. of New York, N.Y.
- Strunk, William Jr. 1979. The Elements of Style, E.B. White, ed. New York: Macmillan Publishing Co., Inc.
- Zingarelli, Il Nuovo. 1988. Vocabolario della Lingua Italiana. Bologna: Zanichelli.

JAPANESE AND KOREAN /k/-/p/ CORRESPONDENCE

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At the 18th LACUS forum, I presented a paper called "A Supplement to Martin's Lexical Evidence", in which I added 14 phoneme-correspondences to the Martin's monumental work(*1).

Inspired by the suggestions given at the same forum regarding the initial /k/-/p/ correspondence observed between Japanese and Korean, I would like to investigate the correspondence further by showing a similar kind of correspondence between them, as I have found that the opposite correspondence also exists between Japanese and Korean.

First, I will show and explain the cases of Japanese initial /k/ corresponding with Korean /p/; and secondly the opposite cases, i.e., the cases of Korean initial /k/ corresponding with Japanese /p/; and thirdly the cases of /k/-/p/ shift observed within Japanese and Korean.

During my recent research I noticed that back in 1981 Dr. Sa-hwa Kim had already published a list of phoneme-correspondences, in which he shows cases of Japanese initial /k/ corresponding with Korean /p/ph/(*2). For the sake of convenience, I will pick and number the cases out of the glossary in the order the words appear in it.

- 1) J gake ~MK pyEro(cliff); 2) J kaze ~MK pARAm(wind); 3) J kasa ~ MK putphi(bulk); 4) J kasa ~ MK pIsIrIm(blotch); 5) J kakafuru ~ MK murIpssI(receive); 6) J kamu ~ MK phIr(to blow one's nose); 7) J kosuru ~MK pupIy(to rub); 8) J kame ~MK pyEng(pot); 9) J kusi ~MK pis(comb); 10) J kudaku ~ MK pAzAa(to break); 11) J kuzu ~ MK pusIrEki(rubbish); 12) J kufa ~MK spong~K ppong(mulberry); 13) J kuri ~MK pam(chestnut); 14) J kabe ~ MK pARAm(wall); 15) J kofu ~ MK pir(to ask); 16) J kuse ~

MK pAyhAs(habit).

I listed the cases 9), 14), and 16) in my paper(*3), and I also endorse 2), 4), 9), 11), 13), 14), and 16). With regard to 5), 8), and 12), however, I am not very sure if they are cognate. As for the Japanese word kame(pot), a certain source mentions that the stem of the word kame is fe(*4), and that it may be cognate with Korean pyEng(bottle)(*5). I believe, however, that the word kame is an indigenous Japanese word, and that MK pyEng is a word borrowed from Chinese. J kame is cognate with MK kama(pot) and MK karm-(keep/ store).

1 Here I will list some more examples of Japanese initial /k/ corresponding to Korean /p/.

1) J kusa ~ MK phIr(grass). Note that Martin has already proven that (a) Japanese vowel /u/ corresponds with Korean /I/, (b) Japanese intervocalic /s/ corresponds with Korean /r/, and (c) Japanese final vowel /a/ corresponds with Korean zero form(*6). J kusa is also cognate with MK kizIm(grass) as the latter's final /m/ is a noun suffix.

2) J Kago~MK paku-ni(basket). The final syllable -ni of MK paku-ni is considered to be a diminutive suffix, whose variant form is found in such words as MK koyaGi(cat), pekaeGi(chick), and tokkaeGi(rabbit)(*7). J kago(basket), fugo(id.), fako(box), and fukuro(bag) are doublets.

3) J kazari(ornament) ~ MK piz-(to adorn).

4) J katamuku ~ K pittur-(to slant).

5) J kara-te ~ K pin-son(empty hand). As for the Japanese intervocalic /r/ and Korean /n/ correspondence, refer to my paper "A Supplement to Martin's Lexical Evidence"(*8).

6) J kinu~MK pitan(silk)

7) J kuse(habit)~MK par(foot)~K pErIs(habit).

8) J kudari(downward)~MK pithar(slope)~K pittur-(to slant). As J tare(hanging) and its homonym tare(slant) are considered to be cognate,

the initial ku- of the J kudari(downward) and pi of MK pithar(slope) are considered to be cognate prefixes.

9) J kuti(mouth)~K puri(bill). Martin has proven the correspondence between the Japanese intervocalic /t/ and Korean /r/>(*Martin p.210). OK *kEcEr(*9) is also cognate.

10) J kuttuku/pittuku~K puthi-(to attach). Since ku- and pi- of J words are prefixes, pu- of K puthi- will also be the same.

11) OJ kura-[tani](ravine)~ MK pirE/pirEy(cliff). JD fira(mountain slope)(*10) , J hori(ditch), MK pirE/pirEy(cliff), MK kor(ravine) and OK *hol(*11) will be cognate.

12) J kuru-[busi](ankle)~MK par(foot). J kuru-busi has a variant form of tubu-busi(*12). MK karAr(leg) is derived from OK *katAr(id.)(*13). OJ kuwe(to kick), which shifts into J ke(id.). Japanese verbs ke(to kick), ku(to come), and kake(to run) share the same etymon *kat(foot) with J kutu(shoes), kati(on foot) and geta(wooden sandal).

13) J keta(beam) ~ K ppaetori(end of beam). As J taru-ki(rafter) and MK torh(beam) are cognate, the ke- of the J keta and ppae- of K ppaetori will be cognate prefixes.

*1 Martin, Samuel E., "Lexical Evidence Relating Korean to Japanese", Language, Vol.42, No.2, 1966

*2 金思輝「古代朝鮮語と日本語」六興出版,昭和56, p.374

*3 Ishii, Hiroshi, "A Supplement to Martin's Lexical Evidence", ILTNEWS 91, Waseda Univ. 1992, pp.39-40

*4 大野晋・他「岩波古語辞典」岩波書店, 1974, p.333

*5 *ibid.*, p. 1146

*6 Martin, pp. 219, 212, 223.

*7 李崇寧「国語造語論攷」乙酉文化社, 1961, pp.124, 125

*8 Ishii, Hiroshi, ILTNEWS 91, p.43

*9 都守熙,「百濟語研究1」百濟文化開発研究院, 1987, p.95

- *3 Ishii, Hiroshi, "A Supplement to Martin's Lexical Evidence", ILTNEWS 91, Waseda Univ. 1992, pp.39-40
- *4 大野晋・他「岩波古語辞典」岩波書店, 1974, p.333
- *5 *ibid.*, p. 1146
- *6 Martin, pp. 219, 212, 223.
- *7 李崇寧「国語造語論攷」乙酉文化社, 1961, pp.124, 125
- *8 Ishii, Hiroshi, ILTNEWS 91, p.43
- *9 都守熙, 「百済語研究1」百済文化開発研究院, 1987, p.95
- *10 「日本国語大辞典」小学館, 昭和50年
- *11 都守熙, p.460
- *12 源順「倭名類聚鈔」937, reprinted 風間書房, 昭和52
- *13 李基文著・藤本幸夫訳「韓国語の歴史」大修館, 1975 p.97

2 In the preceeding chapter I have shown cases of Japanese initial /k/ corresponding to Korean /p/. Here I will list some opposite cases, in which Japanese initial/p/ corresponding Korean /k/. In this paper, however, Japanese initial /p/ denotes /h/, as Modern Japanese/h/ is a shift from Old Japanese /β/; for example, J ha(tooth), in the comound form of deppa(buck tooth) clearly retains older sound. Some Japanese compounds such as su-bayai(quick) and te-bayai(id.) show /b/ as a remnant of the initial /h/ of J hayai(quick). So for convenience's sake, we denote J /h-/ by Japanese initial /p-/. This fact will also explain why J papa(mother) and baba(oldwoman/grandmother) are doublets.

1) J pa(blade)~ MK kar(sword).

2) J pane~MK kis(feather). The ending of -ne of J pane is also observed in such Japanese words as ipa-ne(rock), and kaki-ne(hedge) and is considered to be a suffix.

3) J puka~MK kiph-(deep). I am not sure if these are the results of metathesis or the second syllables of them are also showing inter-vocalic correspondence between J /k/ and K /p/ as we see in J taka~Mk

nophi-(high).

4) J pasa-mi ~ MK kasIy(scissors). The ending of J pasami is a noun suffix: e.g., aka-mi(tinge of red), takami(high place), nukarimi(muddy road/field). cf. MK koy-m(endearment) < MK koy-(to love).

5) J pasi-ka(awn)~MK kasIy(thorn). The Japanese ending of ka is a noun suffix: e.g., padaka(nude), yaka(house), sumika(dwelling).

6) J pa-pa(mother)~MK kas(wife). The original meaning of the MK kas seems to mean 'female/woman' as we have such derivatives as MK kanna-hIy(woman), ka-thri(female pheasant), ka-si(wife/woman), ka-si-nay(girl), kar-po(prostitute).

7) J puyu ~ MK kyEAr(winter).

8) J pana ~ MK kos(flower).

9) J pana(nose)~MK kos-mIr(nasal water).

10) J pa-[si] ~ MK koy-(to love).

11) J pa ~ MK kA(end/border)

12) J -pa ~ MK -ka(subject case marker)

13) J pagu ~ K kha-(to peel)

14) J peta ~ K kkokci(calyx)

15) J pimo ~ MK kin(string).

16) J poru(to dig)~MK kar-(to cultivate)

17) J pi(fire)~MK kup-(to burn). J kebu/kemu(smoke), J kuberu(to put into fire), J keburu(to smolder), the kur of MK kur-s-tok(chimney), MK pur(fire) and Mo gal(id.) are all cognate.

18) J biri([derogatory]girl/woman)~MK kar-po(prostitute). The Korean ending -po corresponds to the Japanese derogatory suffix -bo: e.g., ketin-bo(miser), tum-bo(dumb), corim-bo(untouchable), tim-bo(prick).

J biri([derogatory]woman/prostitute/vagina), baita(prostitute), bita/bettara([derogatory]girl/woman) are cognate. MK *pitar(girl)(*) appearing in the Kerimryusa(*)2) also corresponds to J bita/bettara.

*1 金芳漢「韓国語対系統」民音社, 1983, p.174.

*2 cf. 「鶏林類事」"女兒曰宝姐"

3 Here I will show Japanese cognates derived from /k/-/p/ shifting. It will be rather difficult to find out whether the initial /k/ or the /p/ is the original sound.

1) J papa ~ J kaka(mother). J kaka(mother) is the doubling of J ka (id.), which corresponds to MK kas(wife).

J ofukuro(mother), cognate to J papa and kaka, is analyzed into three morphemes, o(honorific prefix)-fuku(stem)-ro(suffix). It seems that the stem fuku is in the process of shifting into pa·pa(mother) from its original form of ka·ka(id.). J fuku-ro(bag) as well as ko-bukuro (womb) may have influenced this process. Japanese dialects forms for mother, /haka/ and /appako/(#2), also show the process.

As for the shifting between /a/ and /u/, I have already shown some examples elsewhere(*1). I will simply note a few of them here: asai (shallow)~usui(thin), ama~umi(sea), pako(box)~pugo(bag), pata(twenty)~puta(two), nana(seven)~nanuka(seventh day), asa(morning)~asu(tomorrow).

2) J pako(box)/pugo(bag)/biku(creel) ~ J kago(basket). MK koak (coffin) is cognate to the Japanese doublets, and its original meaning will be box, as it is in modern Korean(*3).

3) J pami(bit/to eat)~J kami(to chew)

4) J pagi(to peel)~J kaki(to scratch)

5) J pasibami(hazel)~J kasipa(oak)

6) J pasi-[duma](beloved[wife])~J kasi-[duki](to attend on)

7) J pisoka(secretly)~J kasuka(slight)

8) J pata~J kata(end/border)

9) J pa~J ga(subject marker)

10) J pi~J ka(day)

11) J peta(calyx)~J ketu(bottom/ass)

12) J poru(to dig)~J kuru(to carve)

13) J piru ~ J karu (to dry up)

14) J pusi (joint) ~ J kosi (buttocks)

*1 石井博, “日本語語頭/n/脱落について” ILT NEWS, 90号, 早稲田大学, 1991

*2 宮良当壮「宮良当壮全集2」第一書房, 昭和59, p.12

*3 天理大学朝鮮学科研究室編「現代朝鮮語辞典改訂」養徳社, 昭和55

4 By comparing OK *koraG(blue)(*1) with MK phArA-(id.), OK *kuc(mouth)(*2) with MK puri(bill)/MK hamu(a piece of wood that a soldier bites on while trying to keep silent)/J pami(bit for a horse)/J kami(to chew) cf. J kutuwa/MK ma-ham(bit for a horse), OK *aku(nine)(*3) with MK ahop(id.), and OK *turak(stone)(*4) with MK torh(id.), we can infer that OK /k/ shifts either to MK /ph/p/ or /h/, if it shifts. OK words such as *kArA(river), *koma(bear), *kil(road), *kuti(copper)(*5), however, retain /k/ in MK words.

We find it very difficult to tell whether the original sounds were /ph/, /p/, /h/ or /k/, when we reconstruct their prototypes for Japanese and Korean. Nor do we know which word may retain the older form among the Altaic cognates, e.g., among J pi, MK pIr, Mo gal(fire), and OT kUl(cinders); among J kosi, MK hEri, Mo *bel, and OT bel(waist), or among OK kIm(*6), J kimi, OT xa:n, Mo qan, and Ma han(lord).

J nopokiri(saw) appears in an earlier document than nokogiri(id.), from which we can induce that J kopori(ice) is an older form than kogori(id.), and pusi(joint) than kosi(waist).

Primitive men could make baskets and bags without the technology of lumbering, i.e., J pako(box) should appear later than kago(basket). The reasoning, however, contradicts with the Japanese /p/ > /k/ shifting hypothesis. It is considered that J pugo(basket) or pukuro(bag) appeared earlier than J kago(basket), and when people started making boxes, they substituted an existing word *puk-(container) for the invention. This /p/ > /k/ shifting hypothesis is not applicable to Korean, as we have said.

One way to find out phonetic systems of Old Japanese and Korean is to examine how Chinese words were borrowed in each of them. Here I would like to investigate some cases of borrowings with Chinese initial /x/ or /h/: 1) C 下 xia(below)~K ha~J ka/ge; 2) C 河 he(river)~K ha~J ka/ga; 3) C 学 xue(study)~K haku~J gaku; 4) C 寒 han(cold)~K han~J kan; 5) C 合 he(unite)~K hap~J gafu; 6) C 戸 hu(house)~K ho~J ko; 7) C 回 hui(turn)~K hoe~J kuwai; 8) C 軒 xuan(balcony)~K hon~J ken; 9) C 侯 hou(lord)~K hu~J kou; 10) C 火 huo(fire)~K hwa~J kuwa; 11) C 兄 xiaoG(elder)~K hyoG~J kei; 12) C 香 xiaG(aroma)~K hyaG~J kau; 14) C 休 xia(cease)~K hyu~J kiu(*7).

It is interesting to find C /x/h/ changes into K /h/ and into J /k/, as similar changes are observed among the Altaic languages: e.g., J kemu /kebu-dasi, MK kurstok, Ma hulan, Mo xulaG(chimney)(*8).

A Japanese document Nicuureki, written in the 12th century, may also show some indications as to Japanese phonetic system of those days. The document lists Middle Korean numerals recorded by a Japanese. It shows the Korean equivalent for one is katana(*9). Meanwhile, at almost the same time, a Chinese recorded the same numeral as hAtAn(*10) in the Keri mryusa. These documents are considered to reflect part of the phonetic systems of Japanese and Chinese in the way the writers registered the phoneme /h/: the Japanese heard it as /k/, while the Chinese as /h/. The phoneme /h/ then must have been new to the Japanese, who failed to transcribe it correctly: the Japanese then did not have /h/ sound, and /hi-totu(one)/ was most probably pronounced /pitotu/.

*1 都守熙 p.460

*2 李基文 p.43

*3 都守熙 p.460

*4 *ibid.*, p.459

*5 *ibid.*, p.458

*6 金思燁訳・金富車式著「三国史記・上」六興出版, 昭和 55, p.31)「儒理尼師

今(AD 24~57)」,「脱解尼師今(AD 57~80)」

*7 Kwon, Hyigmyon, Basic Chinese-Korean Character Dictionary, Otto Harrassowitz, Wiesbaden, 1978.

*8 cf. 李基文 p.25

*9 新村出「新村出全集第一卷」筑摩書房,昭和47, p.21-22

*10 李基文 p29

5 If Japanese and Korean are not affiliated, how could we interpret the /k/-/p/ correspondence observed reciprocally between and within the two languages? I believe the degree of correspondence we have demonstrated shows that the affinity between the two languages is strong and deep.

The /k/-/p/ correspondence helped me to prove J pitotu(1) is cognate with K hana(1), as MK hAtAn(1) retains the PJK numeral suffix *tVt with just a /t/ > /n/ change. I demonstrated that OK /k/ shifts any of MK /ph/ /p/, and /h/, if it shifts. The same correspondence also helped me to prove J putatu(2) is cognate with MK kEtIrp(double), whose ending -tIrp is a shifted form from PJK *tVt with another suffix -p, found in MK yE-tIrp as well.

The /k/-/p/ correspondence also proves that MK kEtIrp(double) is a doublet of MK *tupur(2), changed through metathesis. We can also claim that OT ikki(2), and Mo goyar(2) are cognate.

In closing the paper, I must thank 2 scholars, Dr Carleton T. Hodge and Dr John Peter Maher, whose comments for my presentation at the 18th LACUS forum inspired me to develop this presentation.

SOCIOLINGUISTICS

PERCEPTION OF SEX-DIFFERENTIATION IN THE LANGUAGE OF CARTOONS

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Introduction

Popular jokes, stories, and cartoons abound with a kind of folklore about women's speech: popular stereotypes tend to be exaggerated in such sources, particularly in cartoons; such stereotypes are indicative of the attitudes and prejudices prevalent in a particular society. The extent to which speakers of a language ascribe to sex-based stereotypes about speech can be seen in the results of studies in which subjects are asked to identify the sex of the speaker of visually presented statements.

In two experiments involving forced choice judgments of speaker sex, Kramer (1974a, 1974b) found that, when asked to identify the sex of the speaker in a number of captions taken from cartoons in popular magazines, university students showed a clear consensus of agreement that the speaker of a cartoon was of a particular sex. In analyzing their choices, the subjects characterized the stereotyped women's speech as being "stupid, naive, gossipy, emotional, passive, confused, concerned, wordy, and insipid" (Kramer 1974a, p. 626).

In an analysis of the language contained in 156 *New Yorker* cartoons, Kramer (1974b) found that not only did men speak more often than women in the cartoons, but men and women also discussed different topics and talked with different degrees of force. In addition, men swore more often and were more blunt, while women were more likely to use flowery language, to gush, and to use what are sometimes called 'empty' adjectives (such as *nice*); in other words, female speakers in the cartoons tended to use a type of language which has been described as characteristic of women's language by writers such as Jespersen (1922) and Lakoff (1973, 1975, 1977).

The tendency of subjects to assign speaker sex according to stereotypes is not peculiar to young adults, but holds across various age groups. Fillmer and Haswell (1977), e.g., found that elementary students identified intensifiers (*such a nice day* vs *a nice day*) with female speech and swearing with male speech, while Edelsky (1976) found that adults and children in various age groups tended to attribute 'empty' adjectives (*adorable*) and statements containing tag questions to females and swearing to males.

Other studies (e.g., Siegler & Siegler, 1976) have shown that both male and female subjects tend to assign statements to one or the other sex based on such factors as use of assertive

language (typically ascribed to male speakers), use of tag questions (typically ascribed to female speakers), and the like.

The last two decades have seen numerous attempts to provide empirical evidence in support of claims that sex-differentiation in language use exists (see, e.g., Kramer 1974b; Swacker 1975; Dubois and Crouch 1975; Brouwer, Gerritsen, and de Haan 1979; Ursetl 1989), but, for the most part, such claims have not been substantiated with any degree of consistency. Nevertheless, it is clear from studies such as those described above that, whether or not there is a factual basis for it, people continue to ascribe to the popular belief that men and women differ with respect to their use of language.

The experiment described in this paper was a modified version of Kramer (1974b). The captions of cartoons selected from the *New Yorker* magazine were used to assess the ability of subjects to judge the sex of the speaker based solely on the language used in the cartoons. (The *New Yorker* was chosen on the basis of the rather large number of cartoons it contains, and because its readership appears to consist of approximately equal numbers of men and women.) Subjects rated speaker sex on two seven-point scales, a *MALE* scale (henceforth M-scale) and a *FEMALE* scale (henceforth F-scale). It was hypothesized that subjects would differentiate between cartoon captions spoken by males and those spoken by females; if subjects consistently judge certain captions to be spoken by males, and certain other captions to be spoken by females, then there must be something about either the language of the cartoon or the subject matter addressed in the cartoon that marks it for sex of speaker, even if only according to stereotype.

Method

The cartoons used in this study were taken from 11 issues of the *New Yorker* dating from March 12 to May 29, 1990. Sixty-four cartoons were initially selected on the basis of the actual sex of the speaker in the cartoon. To narrow down the size of the experiment, the captions of these cartoons were presented to four male and four female native English speakers who were asked to identify each in terms of speaker sex. Individual cartoon captions for the *Male* and *Female* types to be used in the experiment were selected on the basis of correct prediction by a minimum of 75% of these evaluators. *Neutral* types, which would act as controls, were selected on the basis of 66% or greater agreement among the evaluators that these captions were neutral (i.e., that the evaluators were unable to decide on the sex of the speaker). A total of 24 cartoon captions, eight *Female*, eight *Male*, and eight *Neutral*, were thus selected to serve as stimuli in the main experiment. These captions can be found in the appendix at the end of this paper.

The 24 stimuli were presented to the subjects in the form of a questionnaire. Each stimulus consisted of a cartoon caption and two seven-point scales placed side by side underneath it, where 1 = *Strongly disagree*, and 7 = *Strongly agree*; each scale

was attached to a statement which read either "This statement was spoken by a MALE" or "This statement was spoken by a FEMALE."

In order to control for a possible order of presentation effect, the order of the M-scale and the F-scale was varied; thus, for half of the questionnaires the M-scale preceded the F-scale in the first 12 stimuli and the F-scale preceded the M-scale in the last 12 stimuli, and this order was reversed in the remaining questionnaires. The order of presentation of the stimuli was randomized; it was, however, necessary to ensure that an equal number of each of the three types of stimuli appeared in each half of each questionnaire. The last page of the questionnaire allowed subjects to comment on their choices.

The questionnaires were presented to 91 students in an introductory Linguistics class at the University of Alberta. Subjects were told that the questionnaire contained 24 quotations, some of which had been spoken by men, and some by women. They were instructed to read each quotation carefully and rate it, by circling the appropriate number on each of the seven-point scales provided, as being spoken by either a male or a female, basing their judgments on how they thought men and women *actually* talk, rather than on how they thought men and women *should* talk. After providing the personal information (sex, age, and first language) requested on the first page of the questionnaire, subjects were asked to complete a trial run consisting of three stimuli in order to familiarize them with the experimental task. Since there were no questions, the subjects were then instructed to proceed with the experiment, which took approximately ten minutes to complete.

The 89 useable completed questionnaires were sorted into those completed by native English speaking subjects, and those which were not. The questionnaires in the first group were further sorted by sex and condition. Seven questionnaires were then randomly selected from each sex in each of the two conditions; the constraint was necessary due to a shortage of native English speaking males in the subject pool. The total number of subjects used in the analysis of this experiment was thus 28, with seven males and seven females in each of the two conditions. The subjects ranged in age from 19 to 27.

The data were tabulated and analyzed separately for subjects' responses on the M-scale and the F-scale. Four-factor anovas were conducted to test for significant differences due to the order in which the scales were presented, the sex of the subject, the type of cartoon caption, and individual cartoons within each type. Multiple comparisons (using Tukey's HSD tests) were conducted for those factors which showed significant differences.

Lastly, in an attempt to determine whether, in fact, the use of two scales instead of one results in redundancies, Pearson correlations were calculated, based on the means obtained under each scale.

The mean scores of the subjects on the F-scale and on the M-scale for each cartoon are contained in Tables 1 and 2, respectively, while the overall means by cartoon type are shown in Table 3.

Results

Table 1 shows the mean scores for each cartoon on the F-scale. The scores for the *Female* cartoons ranged from a low of 5.321 for F1 to a high of 6.857 for F7; the scores for the *Male* cartoons ranged from a low of 2.429 for M7 to a high of 4.571 for M1; and the scores for the *Neutral* cartoons ranged from a low of 4.571 for N4 to a high of 5.536 for N5.

The mean scores on the M-scale in Table 2 show that subjects' scores for *Female* cartoons ranged from a low of 1.571 for F7 to a high of 3.821 for F1; the scores for *Male* cartoons ranged from a low of 5.393 for M1 to a high of 6.429 for M4; and the scores for *Neutral* cartoons ranged from a low of 4.036 for N7 to a high of 6.000 for N8.

Table 3, which contains the overall mean ratings for the *Female*, *Male*, and *Neutral* cartoons on each of the seven-point scales, clearly shows the tendency of subjects to judge *Female* cartoons higher on the F-scale (an overall mean of 6.063) and lower on the M-scale (3.009), and *Male* cartoons higher on the M-scale (5.848) and lower on the F-scale (3.232); note that there is a greater difference between the two scales for *Female* cartoons (a mean difference of 3.054) than for *Male* cartoons (a mean difference of 2.616). The overall means for the *Neutral* cartoons, which are higher on both scales than the median of 4, differ only by 0.21.

Table 1
Mean Scores on F-Scale

Cartoon Type					
Female		Male		Neutral	
Cartoon	Mean	Cartoon	Mean	Cartoon	Mean
F1	5.321	M1	4.571	N1	5.464
F2	6.607	M2	3.143	N2	5.214
F3	6.036	M3	2.893	N3	4.893
F4	6.107	M4	2.929	N4	4.571
F5	6.000	M5	3.607	N5	5.536
F6	5.571	M6	3.429	N6	5.393
F7	6.857	M7	2.429	N7	4.786
F8	6.000	M8	2.857	N8	5.071

Table 2
Mean Scores on M-Scale

Female		Cartoon Type Male		Neutral	
Cartoon	Mean	Cartoon	Mean	Cartoon	Mean
F1	3.821	M1	5.393	N1	4.214
F2	2.393	M2	5.821	N2	5.250
F3	2.821	M3	6.250	N3	5.000
F4	2.929	M4	6.429	N4	5.071
F5	3.429	M5	5.786	N5	4.464
F6	3.679	M6	5.786	N6	5.214
F7	1.571	M7	5.786	N7	4.036
F8	3.429	M8	5.536	N8	6.000

Table 3
Overall Mean Ratings for Cartoon Type

Scale	Cartoon Type		
	Female	Male	Neutral
F-Scale	6.063	3.232	5.116
M-Scale	3.009	5.848	4.906

The results of the anovas show that no significant differences exist due to the order of presentation or to the sex of the subject on either of the scales. Significant differences were, however, found as a result of cartoon type: Male captions were significantly identified as spoken by males (by being rated toward the upper end of the M-scale, and toward the lower end of the F-scale), and Female captions were significantly identified

as spoken by females (i.e., judged high on the F-scale and low on the M-scale). For both the M-scale ($F = 224.74$) and the F-scale ($F = 188.87$), this difference was significant at the .0001 level. Multiple comparison tests (Tukey's HSD) show that, for both scales, significant differences exist between each of the three possible pairings of cartoon types. As expected, for both scales the greatest difference was found between the *Male* and *Female* cartoons (a mean difference of 2.831 on the F-scale, and 2.839 on the M-scale); the least difference on the F-scale was between the *Female* and *Neutral* cartoons (a mean difference of .947), and on the M-scale, the least difference was between the *Male* and *Neutral* scales (a difference of .942).

A significant difference was also found for cartoons nested within type ($F = 6.23$ for judgments on the M-scale, and $F = 4.71$ for judgments on the F-scale). Again, both differences were found to be significant at the .0001 level. Tukey tests were again conducted to find out where the differences lay, and these will be discussed in some detail below.

The anova conducted for the M-scale showed a further significant difference for order of presentation by type of cartoon ($F = 3.55$, $p < .05$). Tukey tests showed that the significant difference (of 0.518) existed between the two orders of presentation of the *Female* cartoons. Both male and female subjects rated this type as less likely to be spoken by a male when the M-scale preceded the F-scale in the questionnaire. A corresponding difference was not, however, found on the F-scale.

The Tukey tests which were carried out to discover where the significant differences lay in cartoons within particular types showed some interesting results. On both the F-scale and the M-scale, the *Female* cartoons F1 and F6 differed significantly from F2 and F7. Cartoon F2, which consists of an exclamation frequently attributed to women (*Why, of all the nerve!*), and F7, which contains references to *figure* and (indirectly) to *clothes*, were judged as most female-like on the F-scale, and as least male-like on the M-scale, while the results for F1 and F6, which contain somewhat mixed cues, were the reverse. Although F1 contains a type of adjective (*pretty*) usually attributed to women, the remainder of the statement deals with language that might be more likely to be attributed to men (cues are *domestic front* and *security*). It would be interesting to discover whether subjects' ratings would have changed significantly had the adjective *very* been substituted for *pretty*.

The cartoon M1, which was given the highest rating of any *Male* cartoon on the F-scale, was shown to differ significantly from all but one (M5) of the *Male* cartoons. The reason for this is not immediately clear, but it may have something to do with either the reference to the *National Endowment for the Arts* or the type of language used; perhaps the phrase *we think* is also a factor, since women are said to use it more often than men. The Tukey tests showed no significant differences between individual *Male* cartoons.

Although the multiple comparisons showed no significant differences between individual *Neutral* cartoons as judged on the

F-scale, significant differences were found on the M-scale. The cartoon N8, which was given the highest rating of the *Neutral* cartoons on the M-scale, was found to differ significantly from the three cartoons judged to be least male-like (N7, N1, N5); and N7, which was given the lowest rating, differed significantly from the three highest or most male-like (N8, N2, N6).

Several other interesting points are worth noting. A look at the mean scores for the M-scale in Table 2 show that the *Neutral* cartoon N8 (*What difference does it make, anyway?*) was judged as highly likely to be spoken by a male (with a mean of 6.000), in fact, more so than all but two of the *Male* cartoons. The reason for this is not clear - the statement *appears neutral*. The only two statements that were judged to be more male-like than N8 were M3, which contains a reference to *welding* (a sex-typed occupation), and M4, in which the speaker addresses someone as *buddy* (not an address term generally used by women).

An analysis of the subjects' reasons for assigning specific captions to a specific sex shows that speech was most often attributed to men on the basis of occupation (e.g., *welding*, *craftsmen*), topic (e.g., *war*, *H-bomb*), and manner of address (e.g., *chaps*, *buddy*), and to women on the basis of topic (e.g., *figure*) and the use of certain types of constructions in their language which included adjectives such as *pretty*, *absolutely*, and *sweet little*. Some of the subjects admitted to basing their judgments, at least in part, on stereotypes; others indicated their judgments were based on their own speech or the speech of people they knew.

Finally, the results of the Pearson correlation indicate that, overall, the two scales were significantly negatively correlated ($r = -0.861$, $p < .01$); the correlation was greatest for the *Female* cartoon type ($r = -0.941$, $p < .01$), but was also significant for the *Male* cartoon type ($r = -0.785$, $p < .05$); as could be expected, the scales did not correlate for the *Neutral* type of cartoon. On further examination, it was found that the negative correlation of the two scales was significant for 5 *Female* cartoons (F1, F2, F3, F4, F6) and 4 *Male* cartoons (M2, M4, M5, M8). In all, then, the scales were significantly negatively correlated for 62.5% of the *Female* cartoons and 50% of the *Male* cartoons. Despite individual differences among the cartoons, the highly significant correlation between the two scales, overall as well as for specific types, suggests that the use of two scales for this type of judgment task may, in fact, result in redundancy.

Conclusions

The hypothesis tested in this experiment was that subjects would be able consistently and correctly to identify the sex of speakers in cartoon captions. The results show that this was indeed so: subjects significantly rated *Male* cartoons as more likely to have been spoken by males, and *Female* cartoons as more likely to have been spoken by females. These results lend credence to the popular view that men and women talk differently;

they show that, whether or not actual differences exist in the language as used by men and women (and empirical evidence has to date failed to corroborate claims of sex-differentiation in the use of language), the *perception* of sex-differentiation continues to flourish in the minds of native speakers.

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References

- Brouwer, D., Gerritsen, M., & de Haan, D. (1979). Speech differences between women and men: On the wrong track? *Language in Society* 8: 33-50.
- Dubois, B.L. & Crouch, I. (1975). The question of tag questions in women's speech: They don't really use more of them, do they? *Language in Society* 4: 289-94.
- Edelsky, C. (1976). The acquisition of communicative competence: Recognition of linguistic correlates of sex roles. *Merrill-Palmer Quarterly* 22, 47-59.
- Fillmer, H.T. & Haswell, L. (1977). Sex-role stereotyping in English usage. *Sex Roles* 3, 3, June, 257-263.
- Jespersen, O. (1922). The woman. Chapter XIII of *Language: Its Nature, Development and Origin*. London: Allen & Unwin, pp. 237-254.
- Kramer, C. (1974a). Stereotypes of women's speech: The word from cartoons. *Journal of Popular Culture* 8, 624-630.
- Kramer, C. (1974b). Folklinguistics: Wishy-washy mommy talk. *Psychology Today* 8, June, 82-85.
- Lakoff, R. (1973). Language and woman's place. *Language in Society* 2, 45-73.
- Lakoff, R. (1975). *Language and Woman's Place*. New York: Harper & Row.
- Lakoff, R. (1977). Women's language. *Language and Style* 10, 4, Fall, 222-247.
- Siegler, D.M. & Siegler, R.S. (1976). Stereotypes of males' and females' speech. *Psychological Reports* 39, 167-170.
- Swacker, M. (1975). The sex of the speaker as a sociolinguistic variable. In B. Thorne & N. Henley (eds) (1975), *Language and sex: Difference and dominance* (pp 76-84).
- Ursel, K. (1989). Gender differences in language use: The role of the addressee. Unpublished Honors Thesis, University of Alberta.

Appendix

Stimuli

A. 'Female' Cartoon Captions

- F1 We're pretty traditional around here. I handle everything on the domestic front except security.
- F2 Why, of all the nerve!
- F3 E_, honey, isn't Mr. Stripes pretty? He just had his shots.
- F4 Try not to be late. We are having Moussaka.
- F5 And we wore clothes that were loose-fitting and sensibly layered, and comfortable shoes.
- F6 Eat your borscht. Don't you want to be President of the Soviet Union when you grow up?
- F7 You're so lucky, B_. With your figure, you can wear anything.
- F8 We'd like a building where a sweet little cairn terrier can bark once in a while without the neighbors' getting absolutely hysterical.

B. 'Male' Cartoon Captions

- M1 Tell the National Endowment for the Arts that we think funding for the B-2 is fully justified by the magnificent way it defines volumes with concave and convex spaces.
- M2 By the way, does either of you chaps happen to know anything about Bonsai?
- M3 If nothing else needs welding, P_, I'm going to lunch.
- M4 OK, buddy, it's your skin.
- M5 Might them be fightin' words?
- M6 'No war' is hell, too.
- M7 Just so you understand in advance - we're not oldtime craftsmen, and we don't take pride in our work.
- M8 Bring that H-bomb over here, will you, T_, and just slip it into my 'out' box.

C. 'Neutral' Cartoon Captions

- N1 I'm just not in an Australian-movie mood, OK?
- N2 It's nice to get out of Okefenokee for a few days.
- N3 You fool!
- N4 When did the industry target you for smoking?
- N5 Well, they certainly have spruced things up around here!
- N6 What is he doing?
- N7 I rub my body with animal fat and swim around Manhattan.
- N8 What difference does it make, anyway?

METHODOLOGY

SHOEBOXES AND TYPEWRITERS OR COMPUTERS?

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Have you ever prepared text material for publication? What kind of problems did you encounter? I've thought about it a lot ever since starting work on the Isthmus Zapotec language of southern Mexico. In fact, one requirement our Institute makes for completion of a field program is "some published texts." As part of the Isthmus Zapotec program my colleagues and I have published a number of texts for the purpose of providing reading material for native speakers. Some have had a free translation in Spanish for the text as a whole (nothing sentence-by-sentence), but none have had a literal translation which would be useful for linguists, anthropologists, or folklorists interested in linguistics. That would have been much more difficult to prepare. In the days before computers and even with the first computer programs, this job was quite tedious. Placing the literal translation of a word or morpheme directly below the corresponding element was even more tedious. Lining up elements interlinearly seemed beyond possibility.

But those difficulties have been eliminated with a new program prepared by John Wimbish, labeled "Shoeb...".¹ Shoebox is a program especially suited for interlinear text glossing. It includes the use of fields and field markers (to be described later), and it places the morphemes and words in separate data bases. The program then supplies glosses automatically in the text with a vertical lineup.

The program is being used by the Mexico Branch of the Summer Institute of Linguistics to prepare interlinear analyzed text materials in various Mexican Indian languages for archiving. For five languages, a set of texts and their analyses are virtually complete and ready for storage in archives of both computer disks and hard copy. Materials in other languages are in process. Meanwhile, we are negotiating with two

¹ The name is in memory of the old shoe boxes frequently used for storing 3x5 slips for linguistic analysis. Copies of the program may be obtained from: JAARS, Box 248, Waxhaw, NC 28173.

universities, one in Mexico and one in the U.S., for permanent, accessible storage for the archives. An editorial board from these (and perhaps other) institutions is being formed.

The design of the archives is the work of Albert Bickford and Stephen Marlett, and they supervise the seminars in which the work is being done. They have prepared a procedural manual (Bickford and Marlett 1992) for use in these seminars.²

Once the problems of providing consistent glosses and lining them up properly were solved by the computer program, various questions emerged. The contents of this paper will focus on these questions as they apply to Isthmus Zapotec.³

Question 1: For what audience?

The archives are planned not only to be useful for linguists, but also to be accessible to native speakers of the languages. For this purpose, a field⁴ labeled practical orthography (\po), that used in publications for native-speaker readers, is included. This field should also be useful to scholars who have some of the popular literature available for comparison.

A second field, labeled technical orthography (\to), is designed for linguists. Standard linguistic symbols are used for this line. Both types of orthographies are explained in a separate file on Phonology.

Question 2: How to represent morphemic alternation?

The \po and \to fields show full words, without morpheme breaks, as they actually occur in the text. The next field is \mr "morphemic representation," and here the morphemes are indicated in their basic forms, separated by a hyphen. Examples:

² J. Albert Bickford and Stephen A. Marlett, 1992, SIL-Mexico Guide to Text Glossing and Archiving (unpublished manuscript). For information write to Bickford or Marlett, Box 8987 CRB, Tucson, AZ 85738-0987.

³ The other languages in the first set are Seri, OzumacIn Chinantec, and Quioquitani and Texmelucan Zapotec.

⁴ Each field is printed on a separate line.

\po biree	\po iní'
\to biré'	\to iní?
\mr b-re'	\mr g-ni?

The verb *biré'*, meaning 'came out' includes two morphemes, the completive aspect prefix and the stem *re'*. In the *\mr* field, the basic form for the completive is given (*b-*). The full form *biré'* includes an epenthetic vowel.

The verb *iní?* meaning 'will speak' includes the potential prefix and the stem *ni?*. The basic form for the potential is *g-*, with epenthetic *i* before consonants. However, in normal speech, the phoneme /g/ is frequently lost when initial in unstressed syllables.

Question 3: How to clarify sense discriminations?

When the text being presented includes a morpheme or word which has a variety of meanings, which one does the analyst choose? Do we choose the most basic meaning and use it in all occurrences, or do we use a variety of meanings depending on the context? The way Bickford and Marlett have set up Shoebox for the archive project allows us to do both. Following the *\mr* field is the *\em* field, "English morpheme gloss." This field presents the central meaning of the morphemes. It is followed by the *\ew* field, "English word gloss," which is adjusted to the particular context. For example, in some languages, the word meaning 'moon' can also mean 'month'. The *\em* field would show 'moon' while the *\ew* gloss would be the proper meaning for the context. In Isthmus Zapotec, the form *lu* basically means 'face'. But it sometimes refers only to the eye, and it is also used as a preposition. Hence the *\ew* gloss might be 'face', 'eye', 'on', or 'to'.

Question 4: How to treat multiple-word entries?

How can we indicate glosses when the text includes a sequence of words with an idiomatic meaning which has an English single-word gloss? These are written as separate words with underlining rather than space between them in the first four fields, but translated with a single word in the *\ew* field. If in any situation the English free translation requires more than one word, these are separated by periods.

Example:

```
\po dxa_gui
\to ja_gi
\mr ja2_gi
\em S/full_fire
\ew is.swollen
```

Note also that this example includes the basic form for 'full': ja2, with its glottal stop, which is lost in medial position. This form also includes both the meaning of 'stative' (marked S) and the stem for 'full'. Because there is no overt stative prefix in this case, the S is separated from 'full' by a slash.

Question 5: How to distinguish homophones?

When two distinct morphemes are of exactly the same shape and are listed separately in the glossary, the program provides a system for choosing in each situation which gloss to use. It adds a superscript number on each form, as a dummy symbol to distinguish them while operating. The numbers are then deleted before the final printout.

An example in Isthmus Zapotec are two morphemes with the shape ti. One means the article 'a' or the number 'one' when preposed to a noun. The second ti represents the conjunction 'so that':

\po ti	\po ti
\to ti	\to ti
\mr ti	\mr ti
\em a	\em so.that
\ew one	\ew so.that

Question 6: How to handle tone pairs?

In Isthmus Zapotec, tone is not indicated in literature prepared for native speakers, because it does not carry a heavy functional load, and because the tones differ from one town to another. I have also chosen not to mark tone in the technical orthography used in the archive. I did, however, include some typical tongue twisters which are based partly on stress contrasts, partly on tone. Since the program had no way to

distinguish these seemingly homophonous forms, tone was indicated in crucial spots. One of these tongue twisters is included in the appendix as an example of a complete glossing. Tones are indicated in parentheses, e.g. (LH) for the sequence Low-High

The program does, however, provide a line for inclusion of tone. In the case of some languages, such as Chinantec, this field is very important.

Question 7: How to accommodate speakers of two languages?

Because some users of the archive may understand Spanish, but not English, two further fields are provided. The \sm field gives a morpheme gloss in Spanish, and the \sw field gives the Spanish word gloss.

Question 8: How to relate the forms in the text to the specific forms cited in published dictionaries.

The \cf field, "citation form," gives the readers the basic form as it occurs in an accompanying bilingual dictionary (or will occur in a dictionary which is in preparation). This is especially important in the case of verbs, since many indigenous languages do not have a form similar to the infinitive entries found in Spanish and English dictionaries. Frequently they require the inclusion of one or more affixes for tense/aspect or person referent. When these are prefixes, it is especially needful to know which form has been selected for dictionary entries so that it can be located in alphabetical order.

Isthmus Zapotec requires an aspect prefix and a subject-marking enclitic. For the dictionary entry we have chosen the habitual aspect and a 0 third person enclitic which does not distinguish among 'person', 'animal' and 'inanimate'. The enclitics are written as separate words in the \po field and preceded by an = sign in the \to field.

Question 9: How can the reader make sense out of literal translations of morphemes and words?

Finally, two fields, "English translation" (\et) and "Spanish translation" (\st), provide a fairly free translation of each clause or sentence. Thus the glossing is on three levels: very literal in the morpheme fields, some adjustment to context in the word fields, and a free translation in the final two fields.

Question 10: How to clarify items in the texts which cannot be fully understood from the glosses?

Two optional fields, "English notes" (\en) and "Spanish notes" (\sn), provide explanations of various types. These may include background information, e.g., details of previous events; explanations of cultural, lexical, phonological or grammatical facts that are relevant to a specific unit or word; or bibliographic references to fuller explanations of one of these items.

There are various accessory files that accompany the text collection: phonological and grammatical sketches; introduction to the compiler and his/her work; social and cultural descriptions; background information regarding the individuals who provided the texts; and a bibliography. In addition, an information file for each text presents a brief summary of the story or explanation of the material in the text.

APPENDIX

The following sentences have been excerpted from two Zapotec texts to show various special features as well as the fully glossed forms.

Sample 1

The third item in this sentence is a topical marker, *la*, which has a higher tone than those in the rest of the sentence. It is written *la?* in the practical orthography because readers of Spanish associate a question mark with high pitch. As illustrated by *la*, grammatical morphemes which do not have a lexical translation, are marked with * in both the \ew and \sw fields. The triple equal symbol indicates a potential morpheme break which is undefined in the glossing, but explained elsewhere. The total form *nuu xpiaani'* is another example of an idiomatic expression.

Zp1st Brothers sent 004.1

\po Chupa que	la?	nuu_xpiaani	0
\to čupa ke	la	nú'__špyá'ni	=0
\mr čupa ke	la	na-u' -ššpya'ni?	=0
\em two Ds	Top	S -be -intelligence	3
\sm dos Ds	Top	Es-estar-inteligencia	3
\ew two those	*	were.intelligent	they
\sw dos aquellos	*	eran.inteligentes	ellos
\cf chupa que	la?	*nuu_xpiaani'	*

\et Two of them were intelligent,
 \st Dos de ellos eran inteligentes,

Sample 2

This sentence includes two further uses of the asterisk marker. In the \mr field, it indicates that the form **galán** is a borrowing from old Spanish, but with a different range of meaning. In the \cf field, the asterisk is used to indicate that the word is not included in the published dictionary, but would be spelled this way if it had been included. The English and Spanish notes are of a grammatical nature.

Zp1st Brothers sent 009.3

\po ti	ihuinni	/ tu	jma	galán
\to ti	iwín:i	/ tu	šmá	galán
\mr ti	g-win:i	/ tu	šma	galan*
\em so.that	P-appear	/ who	more	beautiful
\sm para.que	P-aparecer	/ quién	más	bello
\ew so.that	will.appear	/ who	most	beautifully
\sw para.que	aparezca	/ quién	más	bello
\cf ti	rihuinni	/ tu	jma	*galán

\po ini' _xcaanda'.
 \to ini? _šká'nda?
 \mr g-ni? -šēka'nda?
 \em P-speak -dream
 \sm P-hablar-sueño
 \ew will.dream
 \sw soñará
 \cf rim' _xcaanda'

\et so it will be apparent who has the best dream.
 \st para que parezca quién tiene el mejor sueño.

\en The second clause (beginning with tu) functions as the subject of the first clause.
 \sn la segunda sintagma (que empieza con tu) probablemente funciona como sujeto de la primera.

Sample 3

This sentence illustrates the occasional use of tone markers (LH for low-high sequence). It also includes notes of a lexical nature.

Zp1st twisters sent 001.1

\po	Ti	bidxi	bidxi	bichii	lidxi	Ø	ne
\to	ti	bí'ji(LH)	bí'ji	bič'í'	lí'ji	=Ø	ne
\mr	ti	bi'ji?	bi'ji	b-č'í'	li'ji	=Ø	ne
\em	a	toad	dry	C-cover	home	3	with
\sm	un	sapo	seco	C-cubrir	hogar	3	con
\ew	a	toad	dry	covered	house	his	with
\sw	un	sapo	seco	cubrió	casa	su	con
\cf	ti	bidxi'	nabidxi	ruchii	lidxi	*	ne

\po	ti	biidxi	bidxi	bidxi.
\to	ti	bí'ji	bi'í	bí'ji
\mr	ti	bi'ji?	bi'ji	bi'ji
\em	a	seed	pitahaya	dry
\sm	un	semilla	pitahaya	seco
\ew	a	seed	pitahaya	dry
\sw	una	semilla	pitahaya	seca
\cf	ti	biidxi'	bidxi	nabidxi

\et A skinny toad covered his house with a dry cactus-fruit seed.

\st Un sapo flaco cubrió su casa con una semilla seca de pitahaya.

\en The word **bidxi** "dry" is sometimes used idiomatically to indicate extreme thinness.

\sn La palabra **bidxi** "seco" a veces se usa como modismo para indicar delgadez extrema.

DETERMINING THE ANALYSIS CAPABILITIES OF FIVE DISCOURSE OBSERVATION SYSTEMS

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Introduction

The initial question of this study is "What can be revealed if several analysis systems are applied to the same classroom interaction?" In observing a phenomenon observers bring different experiences and backgrounds so that what each observes about a situation is not exactly the same. In regard to educational research, much has been done in observing and revealing processes in teaching and learning, but only recently, within the last half century, have specific instruments been designed to observe and record systematically classroom interaction. Each instrument explains its purpose, what it will analyze, and what results of applying that system expect to show. But a critical question remains: By observing through the eye of one instrument what is being missed. It would be useful to observe a given situation through multiple eyes to understand more specifically what is being systematically observed and what is being ignored. Once that is done, not only can informed decisions be made about the whole of what is occurring, but also the complementary, contradictory, and unique aspects of instruments used to observe classroom behavior will be revealed. Knowledge of these aspects will allow future researchers more guidance in understanding the capabilities of the research instrument(s) they use in their own projects.

The five instruments chosen for comparison vary over a number of areas. The researchers come from several different disciplines--education, psychology, sociology, linguistics; there are different research traditions represented--qualitative and quantitative data collection and analysis; the focus for their instruments differ--problem-solving process of small groups, teaching behavior, student understanding of subject, function of language, social organization of classroom lessons. Yet all these instruments have in common that they provide a means to observe and analyze systematically the verbal interaction of a group of people.

Method of Study

For this exploration, the five systems to be compared are Bales' Interaction Process Analysis (Bales, 1950, 1970), Flander's Interaction Analysis Categories (Flanders, 1970), Barnes' scheme for analyzing the language environment of children during lesson-time (Barnes, 1990), Sinclair and Coulthard's Discourse Analysis (Sinclair & Coulthard, 1975), and Mehan's social organization of the classroom (Mehan, 1979).

In order to understand the capability of each system and to compare and contrast them usefully, the systems are described in chart form according to several dimensions. Next, the units of analysis of the instruments are compared to understand more specifically what each system is designed to reveal. To provide for a useful comparison, a

frame has been developed around constructs common to all systems. This basic frame reveals how the focus of each system demands certain categories for analysis and how the same data can be variously organized and analyzed. Once the instruments had been applied to three taped lessons and results from each determined (see Weed, 1992 for coding and results), the utility of the basic frame was examined and modifications made. A new matrix was then developed to organize data which emerged from the five analyses of the lessons. Overall, these three matrices collectively provide a useful means to understand and analyze the observation capabilities of instruments prior to their actual use.

Chart for comparing dimensions of observational systems

In order to begin to compare the analysis capabilities of these systems, a matrix was developed to highlight the purposes, premises, disciplinary orientation of each researcher, focus, object of study, basic unit of analysis, categories of analysis, coding method, and expected product of analysis (Table 1).

The columns of the matrix reveal essential dimensions of the systems and highlight their overall continuity. The purpose for the system, the premise and the disciplinary background of the researcher, and the focus for the study all influence those aspects of the verbal (and non-verbal) interaction which are noticed. Those noticed aspects are systematically coded into categories of analysis. Methodologically, the systems define their categories, the participants, their coding procedures, and their method of analysis.

The systems can be systematically compared by moving across the rows of the matrix. Such comparison begins to reveal how the same interaction can be variously described and how the application of the systems to the same interaction can provide a fuller interpretation of that interaction.

Table 1: Dimensions of Five Analysis Systems

<u>Dimensions</u>	<u>Bales</u>	<u>Flanders</u>	<u>Barnes</u>	<u>Sinclair & Coulthard</u>	<u>Mehan</u>
Purpose	To provide general purpose standard set of categories for observation and analysis of face-to-face interaction in small groups.	To improve classroom instruction by studying the balance between initiation and response	To investigate the interaction between the linguistic expectations brought by students to their secondary schools and the linguistic demands of teachers	To develop a discourse analysis system which displays the function of utterances	To describe the social organization of classroom events
Premise	All small groups are similar in certain aspects: -include 2-20 persons -focus on common task -deal with social and emotional problems	Interaction, as a series of initiations and responses, can allow students freedom to express themselves	Actual language used influences the learning that takes place	Language is functionally organized	Interaction is socially as well as conceptually organized
Object of study	Verbal and non-verbal interaction in small groups	Verbal communication (selected elements helpful in the analysis of teaching behavior)	Language used by teachers and students	Verbal interaction in classrooms	Verbal and non-verbal lesson structure
Researcher Discipline	Psychology	Education	Education	Linguistics	Sociology; ethnography

<u>Dimensions</u>	<u>Bales</u>	<u>Flanders</u>	<u>Barnes</u>	<u>Sinclair & Coulthard</u>	<u>Mehan</u>
Focus for study	Interaction process for problem-solving groups	Teaching behavior	Language environment	Discourse patterns	Social organization
Categories or units for analysis	12 categories: task problems 3-questions 3-attempted answers socio-emotional problems 3-positive re-actions 3-negative re-actions	10 categories: teacher talk 3-response 1-ask questions 3-initiation student talk 1 response 1 initiation silence or confusion	Series of questions relating to: -teacher's questions -student participation -language of instruction -social relationships -language & other media	Rank order system -lesson -transaction -exchange -move -act	Structure of lessons -hierarchical lesson phase sequence act -sequential opening instructional closing participation structures
Basic unit of analysis	Idea units =smallest discriminable segment of verbal or n-v behavior to which an observer can assign a classification	Event=shortest possible act an observer can identify and record-based on time	No basic unit of analysis	Act=one free clause plus any subordinate ones	Act =interconnected part of interactional sequence
Participants	All group members coded as individual participants	Teacher coded as individual and students coded as a group	All group members coded as individual participants	Teacher coded as individual and students coded as a group	All group members coded as individual participants

<u>Dimensions</u>	<u>Bales</u>	<u>Flanders</u>	<u>Barnes</u>	<u>Coulthard</u>	<u>Mehan</u>
Method of coding	Live; trained observer continuously scores: 1) who speaks to whom and 2) each idea unit based on observer's interpretation of the effect of the utterance on the receiver	Live or taped classroom interaction coded by trained observer. Tallies made approximately every 3 seconds.	Investigator looks through transcript to find evidence of utterances which pertain to investigatory questions. Some questions require inference on part of investigator; some utterances may pertain to more than one question.	Investigator works from transcript of audio recording and codes all utterance into the rank-order system.	Investigator works from transcript of both audio and video recording and codes utterances into the hierarchical and sequential schema.
Form of analysis	Numerical data presented in interaction analysis profiles and interaction matrixes	Numerical data presented in histograms and matrixes	Descriptive prose with some illustrative charts	Graphic display of utterances and their code with descriptive prose	Graphic display of verbal and non-verbal interaction with their codes with descriptive prose
Products of analysis	Percent of individual contributions in various categories Status of group members	Percentages of: -teacher/student talk -time on content -time on control -time on reinforcement & support Ratio of who suggests ideas discussed	Proportion of fact to reasoning ?s. Students' role in learning. Interpretation of: -students' success -teacher use of school register -use of non-linguistic media -lang of content vs language of student	Functional organization of verbal interaction. Prose interpretation (although statistical techniques can be applied)	Description of social structuring used to achieve the lesson under analysis

Comparison Frame for Units of Analysis

In order to continue to reveal those aspects of interaction which are noticed and those which are ignored by the various systems, an in-depth study of the categories and units of analysis for each was undertaken. If the systems themselves can be juxtaposed, a clearer understanding of the elements composing interaction is begun. Such comparison will then assist in interpreting results from a broader point of view.

A frame was developed to display all the various elements (Table 2). A careful study of the researchers' descriptions of their systems revealed that all of them referred to the reciprocal nature of interaction which was accomplished through initiations and responses. These two labels provided the start for a basic comparison frame. Further study revealed that three of the systems recognized a third element in the initiation-response interaction: a feedback element whereby the initiator comments on the responder's remarks. Thus, for these systems, a three-part interactional sequence is basic. The frame was then expanded to include this third element. Two of the systems moved beyond the Initiation/Response phase to describe hierarchically how these elements combined to form larger units of discourse. To accommodate this feature, a category--Hierarchical structure--was added to the left side of the basic frame. Those elements which did not fall into any of the above mentioned categories were included in a category marked "Other." This frame allows investigators to compare the categories of the various systems and note overlapping and unique features.

Table 2: Comparison frame for units of analysis for five analysis systems

	Initiation	Response	Feedback	Other
Bales	Task-related		Socio-emotional	Non-verbal elements included Code who speaks to whom
	Questions	Attempted Answers	Positive reaction	
	Asks for orientation (7)	↔ Gives orientation (6)	Agrees (3) Shows tension release (2) Shows solidarity (1)	
	Asks for opinion (8)	↔ Gives opinion (5)		
	Asks for suggestion (9)	↔ Gives suggestion (4)	Negative reaction	
			Disagrees (10) Shows tension (11) Shows antagonism (12)	
	(can also be initial acts)	(can also be initial acts: same act may be both terminal and initial)		
Flanders	Teacher			Asks questions (4) [teacher] Silence/confusion (10)
	<u>Initiation</u>	<u>Response</u>		
	Lectures (5)	Accepts feelings (1)		
	Gives directions (6)	Praises/encourages (2)		
	Criticizes/justifies authority (7)	Accepts/uses student ideas (3)		
	Student			
Initiation (9)	Response (8)			
Barnes	Teacher			Notes individual student's participation Language of instruction Social relationships Language and other media
	Questions	Reaction		
	factual reasoning open social	to unsolicited statement to inappropriate contribution		
	Students			
	<u>Initiation</u>	<u>Personal Responses</u>		
	content questions factual reasoning procedural	of perception of feeling & attitude		

Hierarchical structure Initiation Response Feedback

Sinclair and Coulthard		Exchange (teaching)	Moves		
			Opening	Answering	Follow-up
Lesson	Transaction	Elicit (t, p) Direct	elicit direct	→ reply → (acknowledge) react	accept evaluate (comment)
		Inform (t, p) Check Reinitiation Listing Reinforce Repeat	inform check	→ acknowledge	
	Eliciting Directing Informing		prompt clue cue bid nomination comment starter loop	(all units in this section are acts)	
Other					
Boundary Exchange →			Framing, Focusing Moves →		
			marker, silent stress metastatement, conclusion		
Mehan		Interaction sequence	Instructional acts		
Lesson ↓ Phase	Topically Related Sets		Initiation	Reply	Evaluation
		direct	directive choice elicitation product elicitation process elicitation metaprocess elicitation	→ react → choice reply → product reply → process reply → metaprocess reply	accept approve reject sanction prompt comment
		inform	informative	→ acknowledge	
			elements added to initiation utterances		
			individual nomination		
			invitation to bid	→ bid	
			invitation to reply grounds	→ withdraw bid	
Other					
Sequential structure		opening, instructional, closing phases	non-verbal elements coded	participants are identified	

Numbers in parentheses indicate category codes. Arrows indicate reciprocal categories.

Modification of the comparison frame

Once lessons had been coded according to the respective five systems, data was entered into the frame. Adding this data proved to be more confusing than enlightening. However, further analysis of the units and categories within each system revealed that initiating verbal behaviors were generally distributed among statements, questions, and commands. By dividing Initiations among these categories, divisions and subdivisions of behavior became clearer and the systems could be more easily compared. The frame was modified as shown in Table 3.

Table 3: Category Frame for comparing observation systems

Type of Utterance	(Hierarchical structure)	Initiation	Response	Feedback
Stating				
Commanding				
Questioning				
Other				

Chart for comparing analyzed features

Beyond the actual categories of the systems are the features which emerge through analysis once interaction has been coded. What features are now available which complement, extend, or contradict findings from the various systems? Again, to compare findings in a useful and easily retrievable format, a matrix was devised. Specific features found in the respective conclusions of the analyses of the interaction according to the five systems were inserted in the matrix.

Table 6: Features Revealed Through Analysis of Interaction According to Five Observation Systems

	Bales	Flanders	Barnes	Sinclair & Coulthard	Mehan
Focus:	problem-solving	teaching behavior	language environment	discourse patterns	social organization
Features:					
Role differentiation among participants	()	T	T	T	T
Teacher					
Percent talk	T	T		()	()
Teaching strategies		T	T	(C)	(C)
Discipline strategies		T	T		T
Turn-allocation procedures				()	T
View of subject			T		
Students					
Initiation (collective)	T	C	T	T	T
Individual participation	T		T	()	T
Status	T		(T)		(C)
Type of response			T		T
Content					
Topic				(T)	T
Problem-solving issues	T				
Organization					
Lesson phases	T			T	T
Hierarchical structure				T	T
Discourse sequence	T			T	T
Pacing		T			
Silence/confusion		T		()	()
Language register			T		
Language of instruction			T		
of relationships			T		
Non-verbal elements	T				T

T=treated; ()=treatment possible; C=conflict in results; (T)= could be treated and was with similar results; (C)= could be treated and was with conflicting results.

Conclusions

A classroom lesson is a complex situation which can be viewed through numerous lenses. From the perspective of each lens, similar behaviors are noticed although they may be labelled differently. One view may notice a behavior, count it, and move on to another, while a second view may notice more details about that first behavior, thus counting it in a different way. One view may not notice a particular behavior at all. Even with five views there is much that remains to be noticed.

The task of this investigation was to describe and analyze the views of classroom interaction presented through five lenses in order to begin to understand what part of the interaction was found in all, some, or

one lens. In order to accomplish this investigation three charts were developed to aid in assessing the analysis capabilities of these five systems and to provide a means to assess any other systems designed to measure discourse interaction. The first matrix (Table 1) displayed the general dimensions of systems thus alerting researchers to the global perspectives surrounding the research instrument. The frame (Table 2; modified in Table 3) provided a means for organizing system categories around general discourse features. By placing categories within this frame, specific aspects of a system's focus were highlighted and comparison with similar aspects of other systems was made possible. The second matrix (Table 4) included features of each system which were revealed through application and analysis of three lessons. Besides providing information about which features were treated in any particular system, the matrix also noted where systems were capable of including a particular feature for which it had not been originally designed, and it provided information regarding conflicting findings. These three charts enable researchers to make informed opinions about the capabilities of these and other systems and provide a readily available means to compare various systems.

The value of such work is threefold. By being aware of findings from this study concerning complementary, contradictory, and unique characteristics of several systems, researchers can use the charts developed here to locate the characteristics of their own instruments and determine how outcomes from such instruments would relate to the broader context provided by comparison of several instruments. Further, if interesting findings occurred through the application of one system, a researcher has a reference to determine which other system would be appropriate in order to pursue more detail about that finding. Finally, this work demonstrated the utility of a multi-perspective design and demonstrated that triangulation is a legitimate method to validate and extend findings.

References

- Bales, R.F. (1950). Interaction process analysis. Cambridge, MA: Addison-Wesley.
- Bales, R.F. (1970). Personality and interpersonal behavior. New York: Holt, Rinehart and Winston.
- Barnes, D., Britton, J., & Torbe, M. (1990). Language, the learner and the school. (4th ed.). Portsmouth, NH: Boynton/Cook.
- Flanders, N. (1970). Analyzing teaching behavior. Reading, MA: Addison-Wesley.
- Mehan, H. (1979). Learning lessons. Cambridge, MA: Harvard University Press.
- Sinclair, J., & Coulthard, R. (1975). Towards an analysis of discourse. Oxford, Eng: Oxford University Press.
- Weed, K. (1992). Views of a classroom: Determining the analysis capabilities of five observational systems. Unpublished doctoral dissertation. Claremont Graduate School, Claremont, CA.

FROM THE 1991 LACUS FORUM

SIGN-ENGLISH AND ENGLISH-SIGN DICTIONARIES

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Introduction. Because there is no convenient or accurate way to represent signs¹ in written form, the compilation of Sign-English and English-Sign dictionaries presents a peculiar difficulty to lexicographers. Nevertheless, many lexicographers have created such dictionaries. This paper will survey contemporary dictionaries, and will make some proposals for future dictionaries.

English-Sign Dictionaries. The most basic English-Sign dictionaries are simple alphabetical lists of English words accompanied by illustrations showing someone making the sign equivalent of each English word. Newell (1983) (Figure 2) is an example of this type of dictionary². Movements are indicated by including 'before' and 'after' locations and handshapes, and arrows which indicate the direction and manner of movement. This method of illustration, or variations thereof, are found in almost all English-Sign dictionaries.

In addition to illustrations, some dictionaries include a verbal description of the execution of the sign. Figure 1, taken from Butterworth (1983), shows an example of this. Many English-Sign dictionaries also include memory aids. Figure 1 contains such a mnemonic. Although these mnemonics often indicate the etymologies of the signs, they will deviate from the etymologies if they are either unknown, or not deemed to be as helpful as another mnemonic. This serves to emphasize the point that most, if not all, English-Sign dictionaries are intended to be learner's dictionaries. Furthermore, they are monodirectional for the English speaker

¹There is a spectrum of types of signing used within the United States. At one extreme end of the spectrum are various manually coded Englishes (MCEs). MCEs are artificial sign systems in which each sign represents an English morpheme, and in which signs are made in English morpheme order. At the other end of the spectrum is American Sign Language (ASL), which is a natural language distinct from English. Most of the vocabulary is constant throughout the spectrum; the grammatical differences are much greater than the lexical differences. In this paper the word 'sign' is used to mean American Sign Language, unless otherwise specified.

²Examples in the appendix have been reduced in size.

learning to sign. Some dictionaries even include usage notes. Figure 4, taken from Jamison (1983)³, contains an example of this.

Hoffman (1988) (figure 10) is an unusual English-Sign dictionary. Its entries are English words and phrases. They are then 'translated' into combinations of English glosses of signs and abbreviated descriptions of signs.

The subject matter of English-Sign dictionaries can be broken into several categories. First, there are general dictionaries. These attempt to include the most frequently used and useful signs. Examples of entries from these kinds of dictionaries are found in the first three figures.

There are also specialized dictionaries. These dictionaries range in topic from computer terminology (Figure 4) to religion (Figure 5, taken from Costello (1986)). These dictionaries can be divided into two categories. The first type, of which the computer dictionary is an example, documents the technical terminology of an occupational field, such as computer programming, in which there are a relatively large number of signers. These dictionaries seem to be designed to help the learner of sign communicate on the job with his coworkers who are fluent signers. They are also useful in stabilizing signs in technical fields, where no single sign or sign phrase has been established for an English term.

The second type of specialized dictionary includes signs on topics such as religion, sex, and drugs. These dictionaries are designed for individuals, such as evangelists, psychologists, and rehabilitation counsellors, who enter into an unequal relationship with signers. The users of these dictionaries hope to improve the signers through their interactions with them.

Sign dictionaries can also be classified by the type of signing they document. Some dictionaries are intended to document a

³Jamison states in the introduction of this book that it "is a sign language book, not a dictionary" (page ix), because it does not include definitions and pronunciation guides. However, despite his disclaimer, his book is a bilingual dictionary, even by his own standards: the definitions are the sign equivalents of the English words. A guide to "pronunciation" of each sign is included by the very fact that the signs are depicted.

Furthermore, although he claims that the dictionary is intended for deaf individuals, *inter alia*, it is nevertheless designed for the person who has a much stronger command of English than of sign. For example, the usage notes given in each entry are in English, and they indicate the usage of the sign, but not of the English *definiendum*.

variety of signed English (e.g. - Bornstein et al. (1983), from which figures 6 and 7 are taken), others are intended to document American Sign Language (ASL) (e.g. - Sternberg (1981), from which figure 3 was taken). There are a few dictionaries which don't even indicate exactly what variety of sign they are trying to document (e.g. - Newell (1983)⁴).

There are even a few dictionaries which attempt to document variations among sign dialects or languages. Carmel (1982) (figure 8) illustrates the fingerspelling alphabets used in different countries around the world. Shroyer and Shroyer (1984) (figure 9) gives the different signs used in different states for a small number of English words.

Sign-English Dictionaries. Stokoe et al. (1976) (figures 11 - 14) was the first Sign-English dictionary. It decomposes each sign into a dez (hand shape), a sig (movement) and a tab (location). There are nineteen dezes, twenty-four sigs, and twelve tabs. Signs are arranged by tabs. Within a tab, they are arranged by dez. Finally, signs having the same tab and dez are arranged by sig.

Even this dictionary, however, appears to be monodirectional for the benefit of the learner of sign. As with its English-Sign counterparts, its discussion of the formation and usage of the signs, and its meaning discriminations, are entirely in English.

This author knows of only one other Sign-English dictionary⁵. Valerie Sutton has devised a more iconic means of writing signs. She used her Sign Writing in her computerized Sign-English and English-Sign dictionaries⁶. These dictionaries are available both as books and as computer software. The Sign-English dictionary is

⁴This dictionary is a companion book to a sign text. The text itself does not state explicitly whether it is an ASL text. Although much of the text does use ASL vocabulary and syntax, and although the text's introduction implies that the text will use ASL syntax, there are nevertheless places where the text and dictionary both deviate from ASL.

⁵There is one other dictionary, A New Dictionary of Sign Language: Employing the Eshkol-Wachmann Movement Notation System, with signs as definienda. This dictionary, however, deals with Israeli Sign Language. Therefore, it is not within the scope of this paper.

⁶ Because of the unusual nature of these dictionaries, a typical bibliographic citation of them would be difficult. Therefore, a complete advertisement for the Sign-English dictionary is given as the last page of the appendix. This page is intended to serve both as an illustration of the dictionary and as a citation.

arranged in a "Sign Symbol Sequence," analogous to alphabetical order. Both dictionaries provide a brief translation (in one or two words/signs) of each definiendum. No pronunciations of English words, usage notes, or meaning discriminations are given. Therefore, although these dictionaries are bidirectional, they are not very useful unless the user is very familiar with both languages. If they were to be fleshed out with such features, however, these dictionaries could become extremely useful.

Dictionaries for Signers. Before discussing the few dictionaries made for signers, it is appropriate to give some demographic information on signers. Furthermore, since hearing individuals with hearing impaired parents become completely fluent in English through their interactions with the community outside of their family, only the information on prelingually deaf signers is relevant to the discussion.

There is much more information available on the deaf population in general than on the signing population. According to Schein and Delk (1974), of the deaf adults ages 25-64:

- 1) 28% have at most an eighth grade education
- 2) between one third and one half have completed high school.
- 3) 12% have had at least one year of college.

According to Ogden and Lipsett (1982), deaf high school graduates have average reading skills between fourth and fifth grade levels. Deaf college graduates have an average reading level of tenth grade.

There is a fairly large number of prelingually deaf people: One out of 1,000 individuals in the US (201,626 reported in 1974) is prelingually deaf.

The above facts give support to the idea that it would be desirable to have dictionaries designed to help fluent signers who are weak in English to better understand and compose spoken and written English. It is unfortunate that only two published dictionaries even come close to doing this. The first one, published in 1966, was entitled *A Dictionary of Idioms for the Deaf* (figure 15). It was monolingual, defining English idioms by means of more literal English expressions. Its name was changed to *A Dictionary of American Idioms* in a later edition, apparently to appeal to a wider audience.

The other dictionary designed for the hearing impaired is Stuart (1986) (figure 16). Each chapter of this unusual book discusses some aspect of Judaism (e.g. - prayers, festival, important people). Each chapter has encyclopedic entries, listed in English alphabetical order. These entries include the Hebrew equivalent of each definiendum, a paragraph in English defining or describing

the definiendum and its relevance to Judaism, and sometimes a sign for the definiendum.

Proposals for future dictionaries. There is clearly an appalling lack of dictionaries designed for signers. Furthermore, conventional books designed for them will continue to face the seemingly insurmountable problem of trying to represent signs in an easily readable written form.

However, technology has already begun to provide us with a solution to this problem. Some of the proposals in this section can be done with the current technology; others will probably become feasible in the near future, as technology progresses.

Dictionaries related to signing can be stored on computer. In addition to English text, animated figures of signers could appear on the screen. It would currently be possible to store "canned" sign definitions of English words. The signer who came across an English word which he did not know could access the dictionary, type the English word, and have a definition or series of definitions given to him in sign. It would even be possible to have a spelling checker as part of a front end to the dictionary. This spelling checker could be designed especially for use by deaf individuals: Not only could it correct common spelling errors, but it could also provide help on visual homonyms. (i.e. - items which look the same when they are speech-read.) For example, if the sequence "bumba" is typed in, the dictionary would be able to recognize this as the entry "by and by".

There are still a couple of technical difficulties to this type of dictionary. First, a great deal of storage space would be required for the definitions. This would make such a dictionary impractical for use with a personal computer. As computer memory is constantly becoming less expensive, and as personal computers have increasingly large storage space, however, the problem of memory should solve itself. CD ROMs, for example, provide a possible, although currently expensive, solution to this problem.

Another problem involves the fact that a given English word can have several possible definitions. It would be nice not to have to watch all of the definitions of a word in order to come to the desired definition. This problem could be solved by an interactive front end to the dictionary. For example, one could access only the definitions of a word as a noun, and could completely bypass all of its meanings when it occurs in other parts of speech.

The interactive front end could also make use of hypertext so that brief definitions could normally be given, but the user could then gain access to other information; for example, register, inflections, synonyms, antonyms, usage notes, etc.

A prototype of this kind of English-Sign dictionary could be done

with today's technology. A computer version of a good Sign-English dictionary, however, would require considerably more work. Even so, we could make a first attempt at writing one today. Signs to be looked up could be entered via data gloves. A data glove is a device which the computer operator wears. The positions of key points on the operator's hand are recorded in a digitized form, which can be used by the computer. The computer would then use the sign as the key to an entry which might simply include English translations of the sign, or might include, in English and/or sign, meaning discriminations, usage notes, etc. Although this type of dictionary could be written today, the data entry would still be somewhat cumbersome. In the future, however, when camcorders are as common as calculators, and when more work has been done on visual recognition, it should be possible to have a front end to this dictionary which would make it not only more user-friendly, but also more powerful. Someone would sign into a camera the sign to be looked up. The computer would translate the image into an appropriate format for lexical lookup. This system could be made more sensitive to the nuances of ASL than would previously have been possible. For example, there is a single sign HAPPY which is used to indicate emotions ranging from mildly happy to ecstatic. The degree of happiness is indicated by (among other things) the size of the sign's movement. Similarly, there is a basic sign SNOW used to convey the proposition that it is (was/will be/might be/etc.) snowing. This sign can be modified to indicate whether it is flurrying or snowing heavily, and whether the snow is coming down at an angle. The current software technology can not process all of these inflections with data from data gloves (e.g. - it can not convert data from data gloves into a form which can be used to determine whether the sign SNOW is being made at an angle to the horizon). In the future, however, it might be possible for an individual to sign a fully inflected form, and have an intelligent front end⁷ break the sign down into a basic form and the inflections used. All of this information would then be used to determine the nearest English word or phrase available in the dictionary. If the dictionary could not come up with a suitable entry, it could indicate this. For example, suppose the basic sign SNOW were inflected to indicate that it was coming down lightly and at an angle. The dictionary might try to look up an English equivalent for this sign. Failing to access one, it might give a response such as the following, "This dictionary does not have a single English word or phrase to convey all of the signed information. 'Flurry' indicates a light snowfall; however, it does not indicate that the snow is falling at an angle." In order to be able to store and retrieve information like this more efficiently, the dictionary could be stored as a semantic network, rather than having all of the information for each entry stored in one place, as would be done in traditional dictionaries.

⁷ The front end would need to include both visual recognition and natural language processing software.

Conclusion. Although there are a number of English-Sign dictionaries, there are few Sign-English ones. Furthermore, almost all bilingual Sign and English dictionaries are monodirectional for the English speaker. If lexicographers were to use the computer as the medium for new dictionaries, much more powerful dictionaries could be made. These dictionaries could aid the signer in encoding or decoding English.

References

- Anonymous. 1987. *1987/88 Catalog*. The National Association of the Deaf: Silver Spring, MD.
- Anonymous. 1989a. *Gallaudet University, A New Beginning: Bookstore Catalog*. Gallaudet University: Washington, D.C.
- Anonymous. 1989b. *Gallaudet University: Press Books*. Gallaudet University: Washington, D.C.
- Anonymous. 1990. *Gallaudet University: Bookstore Catalog*. Gallaudet University: Washington, D.C.
- Boatner, Maxine Tull, John Edward Gates, and Adam Makkai (ed). 1975. *A Dictionary of American Idioms*. (originally published under the title *A Dictionary of Idioms for the Deaf*). Barron's Educational Series: Woodbury, New York.
- Bornstein, Harry, Karen L. Saulnier, and Lillian B. Hamilton (eds.). 1983. *The Comprehensive Signed English Dictionary*. Gallaudet College Press: Washington, D.C.
- Butterworth, Rod R. 1983. *The Perigree Visual Dictionary of Signing*. The Putnam Publishing Group: New York.
- Carmel, Simon J. 1982. *International Hand Alphabet Charts*. Studio Printing, Inc.: Rockville, MD.
- Costello, Elaine. 1986. *Religious Signing*. Bantam Books: Toronto.
- Hoffman, Cheryl M. 1988. *Comprehensive Reference Manual for Signers and Interpreters*. Charles C. Thomas: Springfield, Illinois.
- Jamison, Steven L. 1983. *Signs for Computing Terminology*. The National Association of the Deaf: Silver Spring, MD.
- Newell, William. 1983. *Basic Sign Communication*. The National Association for the Deaf: Silver Spring, MD.
- Ogden, Paul W., and Suzanne Lipsett. 1982. *The Silent Garden: Understanding the Hearing-Impaired Child*. St. Martin's Press: New York.
- Schein, Jerome D., and Marcus T. Delk, Jr. 1974. *The Deaf Population of the United States*. The National Association of the Deaf: Silver Spring, MD.
- Shroyer, Edgar H., and Susan P. Shroyer. 1984. *Signs Across America*. Gallaudet College Press: Washington, D.C.
- Shuart, Adele Kronick. 1986. *Signs in Judaism: A Resource Book for the Jewish Deaf Community*. Bloch Publishing Co.: New York.
- Sternberg, Martin L. 1981. *American Sign Language: A Comprehensive Dictionary*. Harper & Row: New York.
- Stokoe, William C., Dorothy C. Casterline, and Carl G. Croneberg. 1976. *A Dictionary of American Sign Language on Linguistic Principles*. Linstok Press: Silver Spring, MD.

Appendix

PREFER, RATHER

Place the right flat hand on the chest and move it up toward the right while simultaneously changing to an A hand.

Memory aid: The A hand seems to suggest an alternative.

Example: I would *prefer* a blue suit.

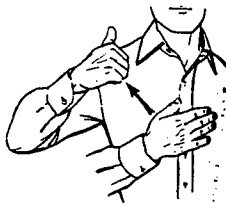


Figure 1



TELL

Figure 2

[C-388]

COOKIE (kōōk' i), *n.* (Act of cutting cookies with a cookie mold.) The right hand, in the "C" position, palm down, is placed into the open left palm. It then rises a bit, swings or twists around a little, and in this new position is placed again in the open left palm. *Cf.* BISCUIT, MUFFIN.



Figure 3

**COMPUTATION, COMPUTE**

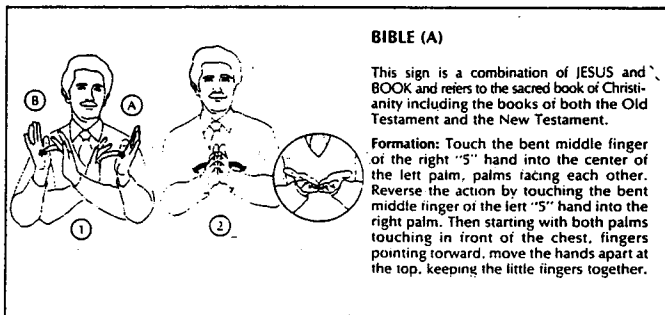
(*cf.* ARITHMETIC, CALCULATE) (dm)

Same sign for: figure, multiply.

Usage: a time-consuming computation; to compute the trigonometric functions.

Note: Palm-in V-hands brush past each other; repeat.

Figure 4

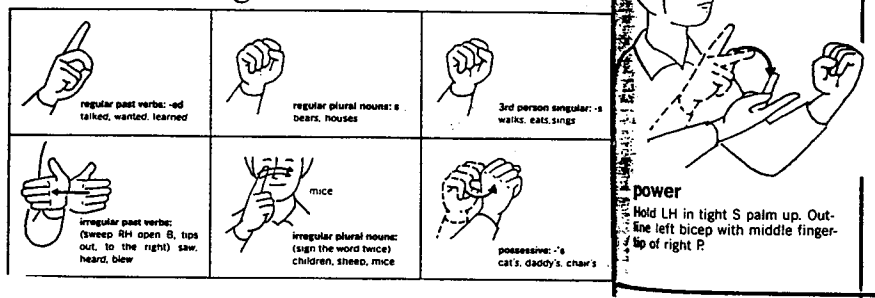
**BIBLE (A)**

This sign is a combination of JESUS and BOOK and refers to the sacred book of Christianity including the books of both the Old Testament and the New Testament.

Formation: Touch the bent middle finger of the right "S" hand into the center of the left palm, palms facing each other. Reverse the action by touching the bent middle finger of the left "S" hand into the right palm. Then starting with both palms touching in front of the chest, fingers pointing forward, move the hands apart at the top, keeping the little fingers together.

Figure 5

Sign Markers



Figures 6-7

GREAT BRITAIN
British hand Alphabet

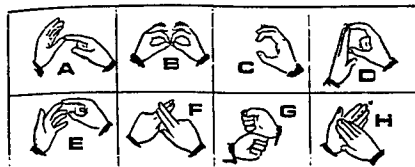


Figure 8



3 California, Florida, Illinois (2
of 2), Kentucky, Maine,
Massachusetts, Missouri, New
Mexico, North Carolina, North
Dakota, Pennsylvania, Utah,
Virginia, Washington, Wisconsin



4 Hawaii

Figure 9

LOGISTICS = LOGIC OR PLAN (def #1) OR SYSTEM
LOTTER = tips of rVpitsd on back of lpdtsr; cir both up, out, down, in tog sev
LOLLIPOP = tip of rt ind pdti points twd open mouth
LONDON = CRAZY w rL
LONELY = rt ind pltu br down chin sev OR twist or tch tip of rt ind on chin

Figure 10

Table of symbols used for writing the signs of the American sign language

Tab symbols

1. $\emptyset$ zero, the neutral place where the hands move, in contrast with all places below.
2. $\bigcirc$ face or whole head
3. $\frown$ forehead or brow, upper face
4. $\cup$ mid-face, the eye and nose region

Dez symbols, some also used as tab

13. A compact hand, fist; may be like 'a', 's', or 't' of manual alphabet
14. B flat hand
15. S spread hand; fingers and thumb spread like '5' of manual numeration
16. C curved hand; may be like 'c' or more open
17. E contracted hand; like 'e' or more clawlike

Sig symbols

32. $\wedge$ upward movement
 33. $\vee$ downward movement
 34. $\sim$ up-and-down movement
 35. $\triangleright$ rightward movement
 36. $\triangleleft$ leftward movement
 37. $\times$ side to side movement
- } vertical action
} sideways action

Figures 11-13

— $\emptyset$ 5 $\uparrow$
'Thew! it's hot.'

$\sim$ $\emptyset$ [G] — $\uparrow$

(dez finger flicks upward from under thumb, grazing tab) $\vee$ understand; $\sim$ understanding.

See also $\cap$ B $\uparrow$ $\times$

See also $\cap$ $\vee$ $\times$ $\times$

lash out v. 1 To kick. *The horse lashed out at the man behind him.* (The horse kicked at the man behind him.) 2 To try suddenly to hit. *The woman lashed out at the crowd with her umbrella.* (The woman swung her umbrella at the crowd.) 3 To attack with words. *The senator lashed out at the administration.* (The senator criticized the administration severely.) *The school newspaper lashed out at the unreasonably way some students treated the vision team.* (The newspaper scolded the students.)

Figure 14

Figure 15

MINOR FESTIVALS

During the Minor Festivals, the Jews can work.

Hanukkah Festival of Dedication

חנוכה

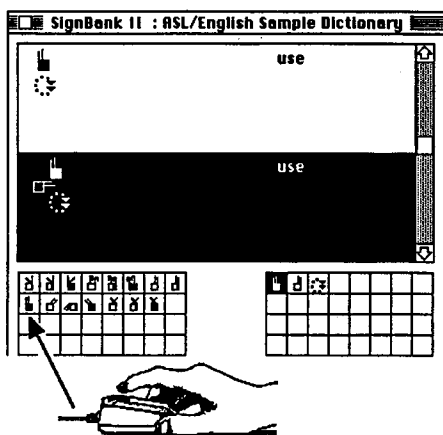
An eight-day festival starts on the 25 of Kislev in remembrance of the Jews' fight for religious freedom under Judah the Maccabee in 165 B.C.E. The eight days recall the miracle of the oil which was enough to burn for one day, but the oil lasted eight days.

See also: Judah the Maccabee; Oil.



Hanukkah
Sides of "4" handshapes touch each other and then move away from each other in down arc movement. May wiggle the fingers to indicate the flame.
Palms facing oneself may be used. Also sign for "Menorah".

Figure 16



The Beginning Of A New Era...

Someday signers will take it for granted that signs can be looked up in dictionaries without using words. Someday signers will learn at young ages how to look up signs, and it will become as automatic as looking up words with the alphabet. SignBank II is the beginning of this new era. Signs can be "searched for" by using Sign Writing symbols. The symbols appear in boxes. The user clicks on a box, and SignBank II finds signs beginning with that symbol.



SignBank II

Including: SignBank II for Macintosh, software manuals, keyboard cards.

	Members	Non-Members
SignBank II Software	\$60.00	\$75.00
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Lessons In Sign Writing	\$20.00	\$30.00
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Fast Mail	\$15.00	\$15.00

Enclosed is my check or money order for\$
in U.S. dollars only, made out to: Center For Sutton Movement Writing.

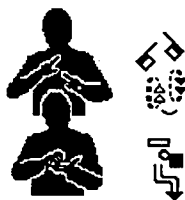
Name _____
Organization _____
Address _____
Telephone/TDD _____

SignBank II

A Desk Accessory for the
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Type A Sign... & Get A Word!

With the SignBank II Desk Accessory, you can use Sign Writing to look up a sign, and presto! the equivalent word-definition appears written next to the sign. Looking up signs without words is now possible with a specially-designed sequence for the symbols in Sign Writing, called the "Sign Symbol Sequence". In English dictionaries, the first group of words begins with the letter A; the second group begins with the letter B. When looking up signs with SignBank II, the first group of signs begins with the handshape for number 1 in ASL **b**; the second group begins with the handshape for number 2 in ASL **b**, and so on.



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